SEQUENCE LISTING

<110> ARKHAMMAR, Per O. G. et al.

<120> AN IMPROVED METHOD FOR EXTRACTING QUANTITATIVE INFORMATION RELATING TO AN INFLUENCE ON A CELLULAR RESPONSE

<130> 0459-0571P

<140> 09/807,345
<141> 2001-04-12

<160> 40

<170> PatentIn version 3.1

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aaa gag ttc cta gcc aaa gcc aag gaa gat ttc ctg aaa aaa tgg gaa       96
Lys Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Lys Lys Trp Glu
            20                  25                  30

gac ccc tct cag aat aca gcc cag ttg gat cag ttt gat aga atc aag      144
Asp Pro Ser Gln Asn Thr Ala Gln Leu Asp Gln Phe Asp Arg Ile Lys
        35                  40                  45

acc ctt ggc acc ggc tcc ttt ggg cga gtg atg ctg gtg aag cac aag      192
Thr Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys
    50                  55                  60

gag agt ggg aac cac tac gcc atg aag atc tta gac aag cag aag gtg      240
Glu Ser Gly Asn His Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val
65                  70                  75                  80

gtg aag cta aag cag atc gag cac act ctg aat gag aag cgc atc ctg      288
Val Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu
                85                  90                  95

cag gcc gtc aac ttc ccg ttc ctg gtc aaa ctt gaa ttc tcc ttc aag      336
Gln Ala Val Asn Phe Pro Phe Leu Val Lys Leu Glu Phe Ser Phe Lys
            100                 105                 110
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gac aac tca aac ctg tac atg gtc atg gag tat gta gct ggt ggc gag      384
Asp Asn Ser Asn Leu Tyr Met Val Met Glu Tyr Val Ala Gly Gly Glu
        115                 120                 125

atg ttc tcc cac cta cgg cgg att gga agg ttc agc gag ccc cat gcc      432
Met Phe Ser His Leu Arg Arg Ile Gly Arg Phe Ser Glu Pro His Ala
    130                 135                 140

cgt ttc tac gcg gcg cag atc gtc ctg acc ttt gag tat ctg cac tcc      480
Arg Phe Tyr Ala Ala Gln Ile Val Leu Thr Phe Glu Tyr Leu His Ser
145                 150                 155                 160

ctg gac ctc atc tac cgg gac ctg aag ccc gag aat ctt ctc atc gac      528
Leu Asp Leu Ile Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Ile Asp
                165                 170                 175

cag cag ggc tat att cag gtg aca gac ttc ggt ttt gcc aag cgt gtg      576
Gln Gln Gly Tyr Ile Gln Val Thr Asp Phe Gly Phe Ala Lys Arg Val
            180                 185                 190

aaa ggc cgt act tgg acc ttg tgt ggg acc cct gag tac ttg gcc ccc      624
Lys Gly Arg Thr Trp Thr Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro
        195                 200                 205

gag att atc ctg agc aaa ggc tac aac aag gct gtg gac tgg tgg gct      672
Glu Ile Ile Leu Ser Lys Gly Tyr Asn Lys Ala Val Asp Trp Trp Ala
    210                 215                 220

ctc gga gtc ctc atc tac gag atg gct gct ggt tac cca ccc ttc ttc      720
Leu Gly Val Leu Ile Tyr Glu Met Ala Ala Gly Tyr Pro Pro Phe Phe
225                 230                 235                 240

gct gac cag cct atc cag atc tat gag aaa atc gtc tct ggg aag gtg      768
Ala Asp Gln Pro Ile Gln Ile Tyr Glu Lys Ile Val Ser Gly Lys Val
                245                 250                 255

cgg ttc cca tcc cac ttc agc tct gac ttg aag gac ctg ctg cgg aac      816
Arg Phe Pro Ser His Phe Ser Ser Asp Leu Lys Asp Leu Leu Arg Asn
            260                 265                 270

ctt ctg caa gtg gat cta acc aag cgc ttt gga aac ctc aag gac ggg      864
Leu Leu Gln Val Asp Leu Thr Lys Arg Phe Gly Asn Leu Lys Asp Gly
        275                 280                 285

gtc aat gac atc aag aac cac aag tgg ttt gcc acg act gac tgg att      912
Val Asn Asp Ile Lys Asn His Lys Trp Phe Ala Thr Thr Asp Trp Ile
    290                 295                 300

gcc atc tat cag aga aag gtg gaa gct ccc ttc ata cca aag ttt aaa      960
Ala Ile Tyr Gln Arg Lys Val Glu Ala Pro Phe Ile Pro Lys Phe Lys
305                 310                 315                 320

ggc cct ggg gac acg agt aac ttt gac gac tat gag gag gaa gag atc     1008
Gly Pro Gly Asp Thr Ser Asn Phe Asp Asp Tyr Glu Glu Glu Glu Ile
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cgg gtc tcc atc aat gag aag tgt ggc aag gag ttt act gag ttt ggg     1056
Arg Val Ser Ile Asn Glu Lys Cys Gly Lys Glu Phe Thr Glu Phe Gly
            340                 345                 350

cgc gcc atg agt aaa gga gaa gaa ctt ttc act gga gtt gtc cca att     1104
Arg Ala Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile
        355                 360                 365

ctt gtt gaa tta gat ggc gat gtt aat ggg caa aaa ttc tct gtt agt     1152
Leu Val Glu Leu Asp Gly Asp Val Asn Gly Gln Lys Phe Ser Val Ser
    370                 375                 380

gga gag ggt gaa ggt gat gca aca tac gga aaa ctt acc ctt aaa ttt     1200
Gly Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe
385                 390                 395                 400

att tgc act act ggg aag cta cct gtt cca tgg cca acg ctt gtc act     1248
Ile Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr
                405                 410                 415

act ctc act tat ggt gtt caa tgc ttt tct aga tac cca gat cat atg     1296
Thr Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met
            420                 425                 430

aaa cag cat gac ttt ttc aag agt gcc atg ccc gaa ggt tat gta cag     1344
Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln
        435                 440                 445

gaa aga act ata ttt tac aaa gat gac ggg aac tac aag aca cgt gct     1392
Glu Arg Thr Ile Phe Tyr Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala
    450                 455                 460

gaa gtc aag ttt gaa ggt gat acc ctt gtt aat aga atc gag tta aaa     1440
Glu Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys
465                 470                 475                 480

ggt att gat ttt aaa gaa gat gga aac att ctt gga cac aaa atg gaa     1488
Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Met Glu
                485                 490                 495

tac aat tat aac tca cat aat gta tac atc atg gca gac aaa cca aag     1536
Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Pro Lys
            500                 505                 510

aat ggc atc aaa gtt aac ttc aaa att aga cac aac att aaa gat gga     1584
Asn Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Lys Asp Gly
        515                 520                 525

agc gtt caa tta gca gac cat tat caa caa aat act cca att ggc gat     1632
Ser Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp
    530                 535                 540

ggc cct gtc ctt tta cca gac aac cat tac ctg tcc acg caa tct gcc     1680
Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala
545                 550                 555                 560
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ctt tcc aaa gat ccc aac gaa aag aga gat cac atg atc ctt ctt gag     1728
Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Leu Leu Glu
                565                 570                 575

ttt gta aca gct gct ggg att aca cat ggc atg gat gaa cta tac aaa     1776
Phe Val Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys
            580                 585                 590

cct cag gag taa                                                    1788
Pro Gln Glu
        595
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Lys Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Lys Lys Trp Glu
            20                  25                  30

Asp Pro Ser Gln Asn Thr Ala Gln Leu Asp Gln Phe Asp Arg Ile Lys
        35                  40                  45

Thr Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys
    50                  55                  60

Glu Ser Gly Asn His Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val
65                  70                  75                  80

Val Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu
                85                  90                  95

Gln Ala Val Asn Phe Pro Phe Leu Val Lys Leu Glu Phe Ser Phe Lys
            100                 105                 110

Asp Asn Ser Asn Leu Tyr Met Val Met Glu Tyr Val Ala Gly Gly Glu
        115                 120                 125

Met Phe Ser His Leu Arg Arg Ile Gly Arg Phe Ser Glu Pro His Ala
    130                 135                 140
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Arg Phe Tyr Ala Ala Gln Ile Val Leu Thr Phe Glu Tyr Leu His Ser
145                 150                 155                 160

Leu Asp Leu Ile Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Ile Asp
                165                 170                 175

Gln Gln Gly Tyr Ile Gln Val Thr Asp Phe Gly Phe Ala Lys Arg Val
            180                 185                 190

Lys Gly Arg Thr Trp Thr Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro
        195                 200                 205

Glu Ile Ile Leu Ser Lys Gly Tyr Asn Lys Ala Val Asp Trp Trp Ala
    210                 215                 220

Leu Gly Val Leu Ile Tyr Glu Met Ala Ala Gly Tyr Pro Pro Phe Phe
225                 230                 235                 240

Ala Asp Gln Pro Ile Gln Ile Tyr Glu Lys Ile Val Ser Gly Lys Val
                245                 250                 255

Arg Phe Pro Ser His Phe Ser Ser Asp Leu Lys Asp Leu Leu Arg Asn
            260                 265                 270

Leu Leu Gln Val Asp Leu Thr Lys Arg Phe Gly Asn Leu Lys Asp Gly
        275                 280                 285

Val Asn Asp Ile Lys Asn His Lys Trp Phe Ala Thr Thr Asp Trp Ile
    290                 295                 300

Ala Ile Tyr Gln Arg Lys Val Glu Ala Pro Phe Ile Pro Lys Phe Lys
305                 310                 315                 320

Gly Pro Gly Asp Thr Ser Asn Phe Asp Asp Tyr Glu Glu Glu Glu Ile
                325                 330                 335

Arg Val Ser Ile Asn Glu Lys Cys Gly Lys Glu Phe Thr Glu Phe Gly
            340                 345                 350

Arg Ala Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile
        355                 360                 365
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```
Leu Val Glu Leu Asp Gly Asp Val Asn Gly Gln Lys Phe Ser Val Ser
    370                 375                 380

Gly Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe
385                 390                 395                 400

Ile Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr
                405                 410                 415

Thr Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met
            420                 425                 430

Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln
        435                 440                 445

Glu Arg Thr Ile Phe Tyr Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala
    450                 455                 460

Glu Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys
465                 470                 475                 480

Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Met Glu
                485                 490                 495

Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Pro Lys
            500                 505                 510

Asn Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Lys Asp Gly
        515                 520                 525

Ser Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp
    530                 535                 540

Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala
545                 550                 555                 560

Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Leu Leu Glu
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            580                 585                 590
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Pro Gln Glu
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1               5                  10                  15

gcc aac cgc ttc gcc cgc aaa ggg gcg ctg agg cag aag aac gtg cat       96
Ala Asn Arg Phe Ala Arg Lys Gly Ala Leu Arg Gln Lys Asn Val His
            20                  25                  30

gag gtg aaa gac cac aaa ttc atc gcc cgc ttc ttc aag caa ccc acc      144
Glu Val Lys Asp His Lys Phe Ile Ala Arg Phe Phe Lys Gln Pro Thr
        35                  40                  45

ttc tgc agc cac tgc acc gac ttc atc tgg ggg ttt ggg aaa caa ggc      192
Phe Cys Ser His Cys Thr Asp Phe Ile Trp Gly Phe Gly Lys Gln Gly
    50                  55                  60

ttc cag tgc caa gtt tgc tgt ttt gtg gtt cat aag agg tgc cat gag      240
Phe Gln Cys Gln Val Cys Cys Phe Val Val His Lys Arg Cys His Glu
65                  70                  75                  80

ttc gtt acg ttc tct tgt ccg ggt gcg gat aag gga cct gac act gac      288
Phe Val Thr Phe Ser Cys Pro Gly Ala Asp Lys Gly Pro Asp Thr Asp
                85                  90                  95

gac ccc agg agc aag cac aag ttc aaa atc cac aca tac gga agc cct      336
Asp Pro Arg Ser Lys His Lys Phe Lys Ile His Thr Tyr Gly Ser Pro
            100                 105                 110

acc ttc tgt gat cac tgt ggg tcc ctg ctc tat gga ctt atc cac caa      384
Thr Phe Cys Asp His Cys Gly Ser Leu Leu Tyr Gly Leu Ile His Gln
        115                 120                 125

ggg atg aaa tgt gac acc tgc gac atg aat gtt cac aac cag tgt gtg      432
Gly Met Lys Cys Asp Thr Cys Asp Met Asn Val His Asn Gln Cys Val
    130                 135                 140

atc aat gac cct agc ctc tgc gga atg gat cac aca gag aag agg ggg      480
Ile Asn Asp Pro Ser Leu Cys Gly Met Asp His Thr Glu Lys Arg Gly
145                 150                 155                 160
```

```
cgg att tat ctg aag gct gag gtc act gat gaa aag ctc cac gtc acg      528
Arg Ile Tyr Leu Lys Ala Glu Val Thr Asp Glu Lys Leu His Val Thr
                165                 170                 175

gta cga gat gca aaa aat cta atc cct atg gat cca aat ggg ctt tcg      576
Val Arg Asp Ala Lys Asn Leu Ile Pro Met Asp Pro Asn Gly Leu Ser
            180                 185                 190

gat cct tat gtg aag ctg aaa cta atc cct gac ccc aag aat gag agc      624
Asp Pro Tyr Val Lys Leu Lys Leu Ile Pro Asp Pro Lys Asn Glu Ser
        195                 200                 205

aaa cag aaa acc aaa acc atc cgc tcc aac ctg aat cct cag tgg aat      672
Lys Gln Lys Thr Lys Thr Ile Arg Ser Asn Leu Asn Pro Gln Trp Asn
    210                 215                 220

gag tcc ttc acg ttc aaa tta aaa cct tca gac aaa gac cgg cga ctg      720
Glu Ser Phe Thr Phe Lys Leu Lys Pro Ser Asp Lys Asp Arg Arg Leu
225                 230                 235                 240

tct gta gaa atc tgg gac tgg gat cgg acg act cgg aat gac ttc atg      768
Ser Val Glu Ile Trp Asp Trp Asp Arg Thr Thr Arg Asn Asp Phe Met
                245                 250                 255

gga tcc ctt tcc ttt ggt gtc tca gag cta atg aag atg ccg gcc agt      816
Gly Ser Leu Ser Phe Gly Val Ser Glu Leu Met Lys Met Pro Ala Ser
            260                 265                 270

gga tgg tat aaa gct cac aac caa gaa gag ggc gaa tat tac aac gtg      864
Gly Trp Tyr Lys Ala His Asn Gln Glu Glu Gly Glu Tyr Tyr Asn Val
        275                 280                 285

ccc att cca gaa gga gat gaa gaa ggc aac atg gaa ctc agg cag aag      912
Pro Ile Pro Glu Gly Asp Glu Glu Gly Asn Met Glu Leu Arg Gln Lys
    290                 295                 300

ttt gag aaa gcc aag cta ggt cct gtt ggt aac aaa gtc atc agc cct      960
Phe Glu Lys Ala Lys Leu Gly Pro Val Gly Asn Lys Val Ile Ser Pro
305                 310                 315                 320

tca gaa gac aga aag caa cca tcc aac aac ctg gac aga gtg aaa ctc     1008
Ser Glu Asp Arg Lys Gln Pro Ser Asn Asn Leu Asp Arg Val Lys Leu
                325                 330                 335

aca gac ttc aac ttc ctc atg gtg ctg ggg aag ggg agt ttt ggg aag     1056
Thr Asp Phe Asn Phe Leu Met Val Leu Gly Lys Gly Ser Phe Gly Lys
            340                 345                 350

gtg atg ctt gct gac agg aag gga acg gag gaa ctg tac gcc atc aag     1104
Val Met Leu Ala Asp Arg Lys Gly Thr Glu Glu Leu Tyr Ala Ile Lys
        355                 360                 365

atc ctg aag aag gac gtg gtg atc cag gac gac gac gtg gag tgc acc     1152
Ile Leu Lys Lys Asp Val Val Ile Gln Asp Asp Asp Val Glu Cys Thr
    370                 375                 380
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atg gtg gag aag cgc gtg ctg gcc ctg ctg gac aag ccg cca ttt ctg     1200
Met Val Glu Lys Arg Val Leu Ala Leu Leu Asp Lys Pro Pro Phe Leu
385                 390                 395                 400

aca cag ctg cac tcc tgc ttc cag aca gtg gac cgg ctg tac ttc gtc     1248
Thr Gln Leu His Ser Cys Phe Gln Thr Val Asp Arg Leu Tyr Phe Val
                405                 410                 415

atg gaa tac gtc aac ggc ggg gat ctt atg tac cac att cag caa gtc     1296
Met Glu Tyr Val Asn Gly Gly Asp Leu Met Tyr His Ile Gln Gln Val
            420                 425                 430

ggg aaa ttt aag gag cca caa gca gta ttc tac gca gcc gag atc tcc     1344
Gly Lys Phe Lys Glu Pro Gln Ala Val Phe Tyr Ala Ala Glu Ile Ser
        435                 440                 445

atc gga ctg ttc ttc ctt cat aaa aga ggg atc att tac agg gat ctg     1392
Ile Gly Leu Phe Phe Leu His Lys Arg Gly Ile Ile Tyr Arg Asp Leu
    450                 455                 460

aag ctg aac aat gtc atg ctg aac tca gaa ggg cac atc aaa atc gcc     1440
Lys Leu Asn Asn Val Met Leu Asn Ser Glu Gly His Ile Lys Ile Ala
465                 470                 475                 480

gac ttc ggg atg tgc aag gaa cac atg atg gat gga gtc acg acc agg     1488
Asp Phe Gly Met Cys Lys Glu His Met Met Asp Gly Val Thr Thr Arg
                485                 490                 495

acc ttc tgc gga act ccg gac tac att gcc cca gag ata atc gct tac     1536
Thr Phe Cys Gly Thr Pro Asp Tyr Ile Ala Pro Glu Ile Ile Ala Tyr
            500                 505                 510

cag ccg tac ggg aag tct gta gat tgg tgg gcg tac ggt gtg ctg ctg     1584
Gln Pro Tyr Gly Lys Ser Val Asp Trp Trp Ala Tyr Gly Val Leu Leu
        515                 520                 525

tac gag atg cta gcc ggg cag cct ccg ttt gat ggt gaa gat gaa gat     1632
Tyr Glu Met Leu Ala Gly Gln Pro Pro Phe Asp Gly Glu Asp Glu Asp
    530                 535                 540

gaa ctg ttt cag tct ata atg gag cac aac gtg tcc tac ccc aaa tcc     1680
Glu Leu Phe Gln Ser Ile Met Glu His Asn Val Ser Tyr Pro Lys Ser
545                 550                 555                 560

ttg tcc aag gaa gcc gtc tcc atc tgc aaa gga ctt atg acc aaa cag     1728
Leu Ser Lys Glu Ala Val Ser Ile Cys Lys Gly Leu Met Thr Lys Gln
                565                 570                 575

cct gcc aag cga ctg ggc tgc ggg ccc gag gga gag agg gat gtc aga     1776
Pro Ala Lys Arg Leu Gly Cys Gly Pro Glu Gly Glu Arg Asp Val Arg
            580                 585                 590

gag cat gcc ttc ttc agg agg atc gac tgg gag aaa ctg gag aac agg     1824
Glu His Ala Phe Phe Arg Arg Ile Asp Trp Glu Lys Leu Glu Asn Arg
        595                 600                 605
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gag atc caa cca cca ttc aag ccc aaa gtg tgt ggc aaa gga gca gaa     1872
Glu Ile Gln Pro Pro Phe Lys Pro Lys Val Cys Gly Lys Gly Ala Glu
    610                 615                 620

aac ttt gac aag ttc ttc acg cga gga cag cct gtc tta aca cca cca     1920
Asn Phe Asp Lys Phe Phe Thr Arg Gly Gln Pro Val Leu Thr Pro Pro
625                 630                 635                 640

gat cag ctg gtc att gct aac ata gac caa tct gat ttt gaa ggg ttc     1968
Asp Gln Leu Val Ile Ala Asn Ile Asp Gln Ser Asp Phe Glu Gly Phe
                645                 650                 655

tcg tat gtc aac ccc cag ttt gtg cac cca atc ttg caa agt gca gta     2016
Ser Tyr Val Asn Pro Gln Phe Val His Pro Ile Leu Gln Ser Ala Val
            660                 665                 670

ggg cgc gcc atg agt aaa gga gaa gaa ctt ttc act gga gtt gtc cca     2064
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        675                 680                 685

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    690                 695                 700

agt gga gag ggt gaa ggt gat gca aca tac gga aaa ctt acc ctt aaa     2160
Ser Gly Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys
705                 710                 715                 720

ttt att tgc act act ggg aag cta cct gtt cca tgg cca acg ctt gtc     2208
Phe Ile Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val
                725                 730                 735

act act ctc act tat ggt gtt caa tgc ttt tct aga tac cca gat cat     2256
Thr Thr Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His
            740                 745                 750

atg aaa cag cat gac ttt ttc aag agt gcc atg ccc gaa ggt tat gta     2304
Met Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val
        755                 760                 765

cag gaa aga act ata ttt tac aaa gat gac ggg aac tac aag aca cgt     2352
Gln Glu Arg Thr Ile Phe Tyr Lys Asp Asp Gly Asn Tyr Lys Thr Arg
    770                 775                 780

gct gaa gtc aag ttt gaa ggt gat acc ctt gtt aat aga atc gag tta     2400
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785                 790                 795                 800

aaa ggt att gat ttt aaa gaa gat gga aac att ctt gga cac aaa atg     2448
Lys Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Met
                805                 810                 815

gaa tac aat tat aac tca cat aat gta tac atc atg gca gac aaa cca     2496
Glu Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Pro
            820                 825                 830
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aag aat ggc atc aaa gtt aac ttc aaa att aga cac aac att aaa gat 2544
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835 840 845

gga agc gtt caa tta gca gac cat tat caa caa aat act cca att ggc 2592
Gly Ser Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly
850 855 860

gat ggc cct gtc ctt tta cca gac aac cat tac ctg tcc acg caa tct 2640
Asp Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser
865 870 875 880

gcc ctt tcc aaa gat ccc aac gaa aag aga gat cac atg atc ctt ctt 2688
Ala Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Leu Leu
885 890 895

gag ttt gta aca gct gct ggg att aca cat ggc atg gat gaa cta tac 2736
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900 905 910

aaa cct cag gag taa 2751
Lys Pro Gln Glu
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35 40 45

Phe Cys Ser His Cys Thr Asp Phe Ile Trp Gly Phe Gly Lys Gln Gly
50 55 60

Phe Gln Cys Gln Val Cys Cys Phe Val Val His Lys Arg Cys His Glu
65 70 75 80

Phe Val Thr Phe Ser Cys Pro Gly Ala Asp Lys Gly Pro Asp Thr Asp
85 90 95

Asp Pro Arg Ser Lys His Lys Phe Lys Ile His Thr Tyr Gly Ser Pro
100 105 110

Thr Phe Cys Asp His Cys Gly Ser Leu Leu Tyr Gly Leu Ile His Gln
115 120 125

Gly Met Lys Cys Asp Thr Cys Asp Met Asn Val His Asn Gln Cys Val
130 135 140

Ile Asn Asp Pro Ser Leu Cys Gly Met Asp His Thr Glu Lys Arg Gly
145 150 155 160

Arg Ile Tyr Leu Lys Ala Glu Val Thr Asp Glu Lys Leu His Val Thr
165 170 175

Val Arg Asp Ala Lys Asn Leu Ile Pro Met Asp Pro Asn Gly Leu Ser
180 185 190

Asp Pro Tyr Val Lys Leu Lys Leu Ile Pro Asp Pro Lys Asn Glu Ser
195 200 205

Lys Gln Lys Thr Lys Thr Ile Arg Ser Asn Leu Asn Pro Gln Trp Asn
210 215 220

Glu Ser Phe Thr Phe Lys Leu Lys Pro Ser Asp Lys Asp Arg Arg Leu
225 230 235 240

Ser Val Glu Ile Trp Asp Trp Asp Arg Thr Thr Arg Asn Asp Phe Met
245 250 255

Gly Ser Leu Ser Phe Gly Val Ser Glu Leu Met Lys Met Pro Ala Ser
260 265 270

Gly Trp Tyr Lys Ala His Asn Gln Glu Glu Gly Glu Tyr Tyr Asn Val
275 280 285

Pro Ile Pro Glu Gly Asp Glu Glu Gly Asn Met Glu Leu Arg Gln Lys
290 295 300

Phe Glu Lys Ala Lys Leu Gly Pro Val Gly Asn Lys Val Ile Ser Pro
305 310 315 320

```
Ser Glu Asp Arg Lys Gln Pro Ser Asn Asn Leu Asp Arg Val Lys Leu
                325                 330                 335

Thr Asp Phe Asn Phe Leu Met Val Leu Gly Lys Gly Ser Phe Gly Lys
            340                 345                 350

Val Met Leu Ala Asp Arg Lys Gly Thr Glu Glu Leu Tyr Ala Ile Lys
        355                 360                 365

Ile Leu Lys Lys Asp Val Val Ile Gln Asp Asp Asp Val Glu Cys Thr
    370                 375                 380

Met Val Glu Lys Arg Val Leu Ala Leu Leu Asp Lys Pro Pro Phe Leu
385                 390                 395                 400

Thr Gln Leu His Ser Cys Phe Gln Thr Val Asp Arg Leu Tyr Phe Val
                405                 410                 415

Met Glu Tyr Val Asn Gly Gly Asp Leu Met Tyr His Ile Gln Gln Val
            420                 425                 430

Gly Lys Phe Lys Glu Pro Gln Ala Val Phe Tyr Ala Ala Glu Ile Ser
        435                 440                 445

Ile Gly Leu Phe Phe Leu His Lys Arg Gly Ile Ile Tyr Arg Asp Leu
    450                 455                 460

Lys Leu Asn Asn Val Met Leu Asn Ser Glu Gly His Ile Lys Ile Ala
465                 470                 475                 480

Asp Phe Gly Met Cys Lys Glu His Met Met Asp Gly Val Thr Thr Arg
                485                 490                 495

Thr Phe Cys Gly Thr Pro Asp Tyr Ile Ala Pro Glu Ile Ile Ala Tyr
            500                 505                 510

Gln Pro Tyr Gly Lys Ser Val Asp Trp Trp Ala Tyr Gly Val Leu Leu
        515                 520                 525

Tyr Glu Met Leu Ala Gly Gln Pro Pro Phe Asp Gly Glu Asp Glu Asp
    530                 535                 540
```

Glu Leu Phe Gln Ser Ile Met Glu His Asn Val Ser Tyr Pro Lys Ser
545 550 555 560

Leu Ser Lys Glu Ala Val Ser Ile Cys Lys Gly Leu Met Thr Lys Gln
565 570 575

Pro Ala Lys Arg Leu Gly Cys Gly Pro Glu Gly Glu Arg Asp Val Arg
580 585 590

Glu His Ala Phe Phe Arg Arg Ile Asp Trp Glu Lys Leu Glu Asn Arg
595 600 605

Glu Ile Gln Pro Pro Phe Lys Pro Lys Val Cys Gly Lys Gly Ala Glu
610 615 620

Asn Phe Asp Lys Phe Phe Thr Arg Gly Gln Pro Val Leu Thr Pro Pro
625 630 635 640

Asp Gln Leu Val Ile Ala Asn Ile Asp Gln Ser Asp Phe Glu Gly Phe
645 650 655

Ser Tyr Val Asn Pro Gln Phe Val His Pro Ile Leu Gln Ser Ala Val
660 665 670

Gly Arg Ala Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro
675 680 685

Ile Leu Val Glu Leu Asp Gly Asp Val Asn Gly Gln Lys Phe Ser Val
690 695 700

Ser Gly Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys
705 710 715 720

Phe Ile Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val
725 730 735

Thr Thr Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His
740 745 750

Met Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val
755 760 765

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Gln Glu Arg Thr Ile Phe Tyr Lys Asp Asp Gly Asn Tyr Lys Thr Arg
    770                 775                 780

Ala Glu Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu
785                 790                 795                 800

Lys Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Met
                805                 810                 815

Glu Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Pro
            820                 825                 830

Lys Asn Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Lys Asp
        835                 840                 845

Gly Ser Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly
    850                 855                 860

Asp Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser
865                 870                 875                 880

Ala Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Leu Leu
                885                 890                 895

Glu Phe Val Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr
            900                 905                 910

Lys Pro Gln Glu
        915
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<210> 5
<211> 1896
<212> DNA
<213> Aequorea victoria and human

<220>
<221> CDS
<222> (1)..(1896)
<223>

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atg gtg agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg      48
Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
1               5                   10                  15
```

```
gtc gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc      96
Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
            20                  25                  30

gag ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc     144
Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
        35                  40                  45

tgc acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc     192
Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
    50                  55                  60

ctg acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag     240
Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65                  70                  75                  80

cag cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag     288
Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                85                  90                  95

cgc acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag     336
Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
            100                 105                 110

gtg aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc     384
Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
        115                 120                 125

atc gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac     432
Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
    130                 135                 140

aac tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac     480
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145                 150                 155                 160

ggc atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc     528
Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
                165                 170                 175

gtg cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc     576
Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
            180                 185                 190

ccc gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg     624
Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
        195                 200                 205

agc aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc     672
Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
    210                 215                 220

gtg acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag tcc     720
Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225                 230                 235                 240
```

```
gga ctc aga tct cga gct caa gct tcg aat tca acc atg gcg gcg gcg      768
Gly Leu Arg Ser Arg Ala Gln Ala Ser Asn Ser Thr Met Ala Ala Ala
                245                 250                 255

gcg gct cag ggg ggc ggg ggc ggg gag ccc cgt aga acc gag ggg gtc      816
Ala Ala Gln Gly Gly Gly Gly Gly Glu Pro Arg Arg Thr Glu Gly Val
            260                 265                 270

ggc ccg ggg gtc ccg ggg gag gtg gag atg gtg aag ggg cag ccg ttc      864
Gly Pro Gly Val Pro Gly Glu Val Glu Met Val Lys Gly Gln Pro Phe
        275                 280                 285

gac gtg ggc ccg cgc tac acg cag ttg cag tac atc ggc gag ggc gcg      912
Asp Val Gly Pro Arg Tyr Thr Gln Leu Gln Tyr Ile Gly Glu Gly Ala
    290                 295                 300

tac ggc atg gtc agc tcg gcc tat gac cac gtg cgc aag act cgc gtg      960
Tyr Gly Met Val Ser Ser Ala Tyr Asp His Val Arg Lys Thr Arg Val
305                 310                 315                 320

gcc atc aag aag atc agc ccc ttc gaa cat cag acc tac tgc cag cgc     1008
Ala Ile Lys Lys Ile Ser Pro Phe Glu His Gln Thr Tyr Cys Gln Arg
                325                 330                 335

acg ctc cgg gag atc cag atc ctg ctg cgc ttc cgc cat gag aat gtc     1056
Thr Leu Arg Glu Ile Gln Ile Leu Leu Arg Phe Arg His Glu Asn Val
            340                 345                 350

atc ggc atc cga gac att ctg cgg gcg tcc acc ctg gaa gcc atg aga     1104
Ile Gly Ile Arg Asp Ile Leu Arg Ala Ser Thr Leu Glu Ala Met Arg
        355                 360                 365

gat gtc tac att gtg cag gac ctg atg gag act gac ctg tac aag ttg     1152
Asp Val Tyr Ile Val Gln Asp Leu Met Glu Thr Asp Leu Tyr Lys Leu
    370                 375                 380

ctg aaa agc cag cag ctg agc aat gac cat atc tgc tac ttc ctc tac     1200
Leu Lys Ser Gln Gln Leu Ser Asn Asp His Ile Cys Tyr Phe Leu Tyr
385                 390                 395                 400

cag atc ctg cgg ggc ctc aag tac atc cac tcc gcc aac gtg ctc cac     1248
Gln Ile Leu Arg Gly Leu Lys Tyr Ile His Ser Ala Asn Val Leu His
                405                 410                 415

cga gat cta aag ccc tcc aac ctg ctc agc aac acc acc tgc gac ctt     1296
Arg Asp Leu Lys Pro Ser Asn Leu Leu Ser Asn Thr Thr Cys Asp Leu
            420                 425                 430

aag att tgt gat ttc ggc ctg gcc cgg att gcc gat cct gag cat gac     1344
Lys Ile Cys Asp Phe Gly Leu Ala Arg Ile Ala Asp Pro Glu His Asp
        435                 440                 445

cac acc ggc ttc ctg acg gag tat gtg gct acg cgc tgg tac cgg gcc     1392
His Thr Gly Phe Leu Thr Glu Tyr Val Ala Thr Arg Trp Tyr Arg Ala
    450                 455                 460
```

```
cca gag atc atg ctg aac tcc aag ggc tat acc aag tcc atc gac atc     1440
Pro Glu Ile Met Leu Asn Ser Lys Gly Tyr Thr Lys Ser Ile Asp Ile
465                 470                 475                 480

tgg tct gtg ggc tgc att ctg gct gag atg ctc tct aac cgg ccc atc     1488
Trp Ser Val Gly Cys Ile Leu Ala Glu Met Leu Ser Asn Arg Pro Ile
                485                 490                 495

ttc cct ggc aag cac tac ctg gat cag ctc aac cac att ctg ggc atc     1536
Phe Pro Gly Lys His Tyr Leu Asp Gln Leu Asn His Ile Leu Gly Ile
            500                 505                 510

ctg ggc tcc cca tcc cag gag gac ctg aat tgt atc atc aac atg aag     1584
Leu Gly Ser Pro Ser Gln Glu Asp Leu Asn Cys Ile Ile Asn Met Lys
        515                 520                 525

gcc cga aac tac cta cag tct ctg ccc tcc aag acc aag gtg gct tgg     1632
Ala Arg Asn Tyr Leu Gln Ser Leu Pro Ser Lys Thr Lys Val Ala Trp
    530                 535                 540

gcc aag ctt ttc ccc aag tca gac tcc aaa gcc ctt gac ctg ctg gac     1680
Ala Lys Leu Phe Pro Lys Ser Asp Ser Lys Ala Leu Asp Leu Leu Asp
545                 550                 555                 560

cgg atg tta acc ttt aac ccc aat aaa cgg atc aca gtg gag gaa gcg     1728
Arg Met Leu Thr Phe Asn Pro Asn Lys Arg Ile Thr Val Glu Glu Ala
                565                 570                 575

ctg gct cac ccc tac ctg gag cag tac tat gac ccg acg gat gag cca     1776
Leu Ala His Pro Tyr Leu Glu Gln Tyr Tyr Asp Pro Thr Asp Glu Pro
            580                 585                 590

gtg gcc gag gag ccc ttc acc ttc gcc atg gag ctg gat gac cta cct     1824
Val Ala Glu Glu Pro Phe Thr Phe Ala Met Glu Leu Asp Asp Leu Pro
        595                 600                 605

aag gag cgg ctg aag gag ctc atc ttc cag gag aca gca cgc ttc cag     1872
Lys Glu Arg Leu Lys Glu Leu Ile Phe Gln Glu Thr Ala Arg Phe Gln
    610                 615                 620

ccc gga gtg ctg gag gcc ccc tag                                    1896
Pro Gly Val Leu Glu Ala Pro
625                 630
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<210> 6
<211> 631
<212> PRT
<213> Aequorea victoria and human

<400> 6

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Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
1               5                   10                  15
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Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
20 25 30

Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
35 40 45

Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
50 55 60

Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65 70 75 80

Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
85 90 95

Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
100 105 110

Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
115 120 125

Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
130 135 140

Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145 150 155 160

Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
165 170 175

Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
180 185 190

Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
195 200 205

Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
210 215 220

Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225 230 235 240

```
Gly Leu Arg Ser Arg Ala Gln Ala Ser Asn Ser Thr Met Ala Ala Ala
                245                 250                 255

Ala Ala Gln Gly Gly Gly Gly Gly Glu Pro Arg Arg Thr Glu Gly Val
            260                 265                 270

Gly Pro Gly Val Pro Gly Glu Val Glu Met Val Lys Gly Gln Pro Phe
        275                 280                 285

Asp Val Gly Pro Arg Tyr Thr Gln Leu Gln Tyr Ile Gly Glu Gly Ala
    290                 295                 300

Tyr Gly Met Val Ser Ser Ala Tyr Asp His Val Arg Lys Thr Arg Val
305                 310                 315                 320

Ala Ile Lys Lys Ile Ser Pro Phe Glu His Gln Thr Tyr Cys Gln Arg
                325                 330                 335

Thr Leu Arg Glu Ile Gln Ile Leu Leu Arg Phe Arg His Glu Asn Val
            340                 345                 350

Ile Gly Ile Arg Asp Ile Leu Arg Ala Ser Thr Leu Glu Ala Met Arg
        355                 360                 365

Asp Val Tyr Ile Val Gln Asp Leu Met Glu Thr Asp Leu Tyr Lys Leu
    370                 375                 380

Leu Lys Ser Gln Gln Leu Ser Asn Asp His Ile Cys Tyr Phe Leu Tyr
385                 390                 395                 400

Gln Ile Leu Arg Gly Leu Lys Tyr Ile His Ser Ala Asn Val Leu His
                405                 410                 415

Arg Asp Leu Lys Pro Ser Asn Leu Leu Ser Asn Thr Thr Cys Asp Leu
            420                 425                 430

Lys Ile Cys Asp Phe Gly Leu Ala Arg Ile Ala Asp Pro Glu His Asp
        435                 440                 445

His Thr Gly Phe Leu Thr Glu Tyr Val Ala Thr Arg Trp Tyr Arg Ala
    450                 455                 460
```

```
Pro Glu Ile Met Leu Asn Ser Lys Gly Tyr Thr Lys Ser Ile Asp Ile
465                 470                 475                 480

Trp Ser Val Gly Cys Ile Leu Ala Glu Met Leu Ser Asn Arg Pro Ile
                485                 490                 495

Phe Pro Gly Lys His Tyr Leu Asp Gln Leu Asn His Ile Leu Gly Ile
            500                 505                 510

Leu Gly Ser Pro Ser Gln Glu Asp Leu Asn Cys Ile Ile Asn Met Lys
        515                 520                 525

Ala Arg Asn Tyr Leu Gln Ser Leu Pro Ser Lys Thr Lys Val Ala Trp
    530                 535                 540

Ala Lys Leu Phe Pro Lys Ser Asp Ser Lys Ala Leu Asp Leu Leu Asp
545                 550                 555                 560

Arg Met Leu Thr Phe Asn Pro Asn Lys Arg Ile Thr Val Glu Glu Ala
                565                 570                 575

Leu Ala His Pro Tyr Leu Glu Gln Tyr Tyr Asp Pro Thr Asp Glu Pro
            580                 585                 590

Val Ala Glu Glu Pro Phe Thr Phe Ala Met Glu Leu Asp Asp Leu Pro
        595                 600                 605

Lys Glu Arg Leu Lys Glu Leu Ile Phe Gln Glu Thr Ala Arg Phe Gln
    610                 615                 620

Pro Gly Val Leu Glu Ala Pro
625                 630
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<210> 7
<211> 2160
<212> DNA
<213> Aequorea victoria and human

<220>
<221> CDS
<222> (1)..(2160)
<223>

<400> 7

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atg gtg agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg       48
Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
1               5                  10                  15

gtc gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc       96
Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
            20                  25                  30

gag ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc      144
Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
        35                  40                  45

tgc acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc      192
Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
    50                  55                  60

ctg acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag      240
Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65                  70                  75                  80

cag cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag      288
Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                85                  90                  95

cgc acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag      336
Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
            100                 105                 110

gtg aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc      384
Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
        115                 120                 125

atc gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac      432
Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
    130                 135                 140

aac tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac      480
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145                 150                 155                 160

ggc atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc      528
Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
                165                 170                 175

gtg cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc      576
Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
            180                 185                 190

ccc gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg      624
Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
        195                 200                 205

agc aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc      672
Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
    210                 215                 220
```

```
gtg acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag tcc      720
Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225                 230                 235                 240

gga ctc aga tct cga gct caa gct tcg aat tcg acc atg tcg tcc atc      768
Gly Leu Arg Ser Arg Ala Gln Ala Ser Asn Ser Thr Met Ser Ser Ile
                245                 250                 255

ttg cca ttc acg ccg cca gtt gtg aag aga ctg ctg gga tgg aag aag      816
Leu Pro Phe Thr Pro Pro Val Val Lys Arg Leu Leu Gly Trp Lys Lys
            260                 265                 270

tca gct ggt ggg tct gga gga gca ggc gga gga gag cag aat ggg cag      864
Ser Ala Gly Gly Ser Gly Gly Ala Gly Gly Gly Glu Gln Asn Gly Gln
        275                 280                 285

gaa gaa aag tgg tgt gag aaa gca gtg aaa agt ctg gtg aag aag cta      912
Glu Glu Lys Trp Cys Glu Lys Ala Val Lys Ser Leu Val Lys Lys Leu
    290                 295                 300

aag aaa aca gga cga tta gat gag ctt gag aaa gcc atc acc act caa      960
Lys Lys Thr Gly Arg Leu Asp Glu Leu Glu Lys Ala Ile Thr Thr Gln
305                 310                 315                 320

aac tgt aat act aaa tgt gtt acc ata cca agc act tgc tct gaa att     1008
Asn Cys Asn Thr Lys Cys Val Thr Ile Pro Ser Thr Cys Ser Glu Ile
                325                 330                 335

tgg gga ctg agt aca cca aat acg ata gat cag tgg gat aca aca ggc     1056
Trp Gly Leu Ser Thr Pro Asn Thr Ile Asp Gln Trp Asp Thr Thr Gly
            340                 345                 350

ctt tac agc ttc tct gaa caa acc agg tct ctt gat ggt cgt ctc cag     1104
Leu Tyr Ser Phe Ser Glu Gln Thr Arg Ser Leu Asp Gly Arg Leu Gln
        355                 360                 365

gta tcc cat cga aaa gga ttg cca cat gtt ata tat tgc cga tta tgg     1152
Val Ser His Arg Lys Gly Leu Pro His Val Ile Tyr Cys Arg Leu Trp
    370                 375                 380

cgc tgg cct gat ctt cac agt cat cat gaa ctc aag gca att gaa aac     1200
Arg Trp Pro Asp Leu His Ser His His Glu Leu Lys Ala Ile Glu Asn
385                 390                 395                 400

tgc gaa tat gct ttt aat ctt aaa aag gat gaa gta tgt gta aac cct     1248
Cys Glu Tyr Ala Phe Asn Leu Lys Lys Asp Glu Val Cys Val Asn Pro
                405                 410                 415

tac cac tat cag aga gtt gag aca cca gtt ttg cct cca gta tta gtg     1296
Tyr His Tyr Gln Arg Val Glu Thr Pro Val Leu Pro Pro Val Leu Val
            420                 425                 430

ccc cga cac acc gag atc cta aca gaa ctt ccg cct ctg gat gac tat     1344
Pro Arg His Thr Glu Ile Leu Thr Glu Leu Pro Pro Leu Asp Asp Tyr
        435                 440                 445
```

```
act cac tcc att cca gaa aac act aac ttc cca gca gga att gag cca     1392
Thr His Ser Ile Pro Glu Asn Thr Asn Phe Pro Ala Gly Ile Glu Pro
    450                 455                 460

cag agt aat tat att cca gaa acg cca cct cct gga tat atc agt gaa     1440
Gln Ser Asn Tyr Ile Pro Glu Thr Pro Pro Pro Gly Tyr Ile Ser Glu
465                 470                 475                 480

gat gga gaa aca agt gac caa cag ttg aat caa agt atg gac aca ggc     1488
Asp Gly Glu Thr Ser Asp Gln Gln Leu Asn Gln Ser Met Asp Thr Gly
                485                 490                 495

tct cca gca gaa cta tct cct act act ctt tcc cct gtt aat cat agc     1536
Ser Pro Ala Glu Leu Ser Pro Thr Thr Leu Ser Pro Val Asn His Ser
            500                 505                 510

ttg gat tta cag cca gtt act tac tca gaa cct gca ttt tgg tgt tca     1584
Leu Asp Leu Gln Pro Val Thr Tyr Ser Glu Pro Ala Phe Trp Cys Ser
        515                 520                 525

ata gca tat tat gaa tta aat cag agg gtt gga gaa acc ttc cat gca     1632
Ile Ala Tyr Tyr Glu Leu Asn Gln Arg Val Gly Glu Thr Phe His Ala
    530                 535                 540

tca cag ccc tca ctc act gta gat ggc ttt aca gac cca tca aat tca     1680
Ser Gln Pro Ser Leu Thr Val Asp Gly Phe Thr Asp Pro Ser Asn Ser
545                 550                 555                 560

gag agg ttc tgc tta ggt tta ctc tcc aat gtt aac cga aat gcc acg     1728
Glu Arg Phe Cys Leu Gly Leu Leu Ser Asn Val Asn Arg Asn Ala Thr
                565                 570                 575

gta gaa atg aca aga agg cat ata gga aga gga gtg cgc tta tac tac     1776
Val Glu Met Thr Arg Arg His Ile Gly Arg Gly Val Arg Leu Tyr Tyr
            580                 585                 590

ata ggt ggg gaa gtt ttt gct gag tgc cta agt gat agt gca atc ttt     1824
Ile Gly Gly Glu Val Phe Ala Glu Cys Leu Ser Asp Ser Ala Ile Phe
        595                 600                 605

gtg cag agc ccc aat tgt aat cag aga tat ggc tgg cac cct gca aca     1872
Val Gln Ser Pro Asn Cys Asn Gln Arg Tyr Gly Trp His Pro Ala Thr
    610                 615                 620

gtg tgt aaa att cca cca ggc tgt aat ctg aag atc ttc aac aac cag     1920
Val Cys Lys Ile Pro Pro Gly Cys Asn Leu Lys Ile Phe Asn Asn Gln
625                 630                 635                 640

gaa ttt gct gct ctt ctg gct cag tct gtt aat cag ggt ttt gaa gcc     1968
Glu Phe Ala Ala Leu Leu Ala Gln Ser Val Asn Gln Gly Phe Glu Ala
                645                 650                 655

gtc tat cag cta act aga atg tgc acc ata aga atg agt ttt gtg aaa     2016
Val Tyr Gln Leu Thr Arg Met Cys Thr Ile Arg Met Ser Phe Val Lys
            660                 665                 670
```

```
ggg tgg gga gca gaa tac cga agg cag acg gta aca agt act cct tgc     2064
Gly Trp Gly Ala Glu Tyr Arg Arg Gln Thr Val Thr Ser Thr Pro Cys
        675                 680                 685

tgg att gaa ctt cat ctg aat gga cct cta cag tgg ttg gac aaa gta     2112
Trp Ile Glu Leu His Leu Asn Gly Pro Leu Gln Trp Leu Asp Lys Val
    690                 695                 700

tta act cag atg gga tcc cct tca gtg cgt tgc tca agc atg tca taa     2160
Leu Thr Gln Met Gly Ser Pro Ser Val Arg Cys Ser Ser Met Ser
705                 710                 715
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<210> 8
<211> 719
<212> PRT
<213> Aequorea victoria and human

<400> 8

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Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
1               5                   10                  15

Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
            20                  25                  30

Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
        35                  40                  45

Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
    50                  55                  60

Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65                  70                  75                  80

Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                85                  90                  95

Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
            100                 105                 110

Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
        115                 120                 125

Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
    130                 135                 140
```

```
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145                 150                 155                 160

Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
                165                 170                 175

Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
            180                 185                 190

Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
        195                 200                 205

Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
    210                 215                 220

Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225                 230                 235                 240

Gly Leu Arg Ser Arg Ala Gln Ala Ser Asn Ser Thr Met Ser Ser Ile
                245                 250                 255

Leu Pro Phe Thr Pro Pro Val Val Lys Arg Leu Leu Gly Trp Lys Lys
            260                 265                 270

Ser Ala Gly Gly Ser Gly Gly Ala Gly Gly Gly Glu Gln Asn Gly Gln
        275                 280                 285

Glu Glu Lys Trp Cys Glu Lys Ala Val Lys Ser Leu Val Lys Lys Leu
    290                 295                 300

Lys Lys Thr Gly Arg Leu Asp Glu Leu Glu Lys Ala Ile Thr Thr Gln
305                 310                 315                 320

Asn Cys Asn Thr Lys Cys Val Thr Ile Pro Ser Thr Cys Ser Glu Ile
                325                 330                 335

Trp Gly Leu Ser Thr Pro Asn Thr Ile Asp Gln Trp Asp Thr Thr Gly
            340                 345                 350

Leu Tyr Ser Phe Ser Glu Gln Thr Arg Ser Leu Asp Gly Arg Leu Gln
        355                 360                 365
```

```
Val Ser His Arg Lys Gly Leu Pro His Val Ile Tyr Cys Arg Leu Trp
    370                 375                 380

Arg Trp Pro Asp Leu His Ser His His Glu Leu Lys Ala Ile Glu Asn
385                 390                 395                 400

Cys Glu Tyr Ala Phe Asn Leu Lys Lys Asp Glu Val Cys Val Asn Pro
                405                 410                 415

Tyr His Tyr Gln Arg Val Glu Thr Pro Val Leu Pro Pro Val Leu Val
            420                 425                 430

Pro Arg His Thr Glu Ile Leu Thr Glu Leu Pro Pro Leu Asp Asp Tyr
        435                 440                 445

Thr His Ser Ile Pro Glu Asn Thr Asn Phe Pro Ala Gly Ile Glu Pro
    450                 455                 460

Gln Ser Asn Tyr Ile Pro Glu Thr Pro Pro Pro Gly Tyr Ile Ser Glu
465                 470                 475                 480

Asp Gly Glu Thr Ser Asp Gln Gln Leu Asn Gln Ser Met Asp Thr Gly
                485                 490                 495

Ser Pro Ala Glu Leu Ser Pro Thr Thr Leu Ser Pro Val Asn His Ser
            500                 505                 510

Leu Asp Leu Gln Pro Val Thr Tyr Ser Glu Pro Ala Phe Trp Cys Ser
        515                 520                 525

Ile Ala Tyr Tyr Glu Leu Asn Gln Arg Val Gly Glu Thr Phe His Ala
    530                 535                 540

Ser Gln Pro Ser Leu Thr Val Asp Gly Phe Thr Asp Pro Ser Asn Ser
545                 550                 555                 560

Glu Arg Phe Cys Leu Gly Leu Leu Ser Asn Val Asn Arg Asn Ala Thr
                565                 570                 575

Val Glu Met Thr Arg Arg His Ile Gly Arg Gly Val Arg Leu Tyr Tyr
            580                 585                 590
```

Ile Gly Gly Glu Val Phe Ala Glu Cys Leu Ser Asp Ser Ala Ile Phe
595 600 605

Val Gln Ser Pro Asn Cys Asn Gln Arg Tyr Gly Trp His Pro Ala Thr
610 615 620

Val Cys Lys Ile Pro Pro Gly Cys Asn Leu Lys Ile Phe Asn Asn Gln
625 630 635 640

Glu Phe Ala Ala Leu Leu Ala Gln Ser Val Asn Gln Gly Phe Glu Ala
645 650 655

Val Tyr Gln Leu Thr Arg Met Cys Thr Ile Arg Met Ser Phe Val Lys
660 665 670

Gly Trp Gly Ala Glu Tyr Arg Arg Gln Thr Val Thr Ser Thr Pro Cys
675 680 685

Trp Ile Glu Leu His Leu Asn Gly Pro Leu Gln Trp Leu Asp Lys Val
690 695 700

Leu Thr Gln Met Gly Ser Pro Ser Val Arg Cys Ser Ser Met Ser
705 710 715

<210> 9
<211> 2157
<212> DNA
<213> Aequorea victoria and human

<220>
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<223>

<400> 9
atg tcg tcc atc ttg cca ttc acg ccg cca gtt gtg aag aga ctg ctg 48
Met Ser Ser Ile Leu Pro Phe Thr Pro Pro Val Val Lys Arg Leu Leu
1 5 10 15

gga tgg aag aag tca gct ggt ggg tct gga gga gca ggc gga gga gag 96
Gly Trp Lys Lys Ser Ala Gly Gly Ser Gly Gly Ala Gly Gly Gly Glu
20 25 30

cag aat ggg cag gaa gaa aag tgg tgt gag aaa gca gtg aaa agt ctg 144
Gln Asn Gly Gln Glu Glu Lys Trp Cys Glu Lys Ala Val Lys Ser Leu
35 40 45

```
gtg aag aag cta aag aaa aca gga cga tta gat gag ctt gag aaa gcc      192
Val Lys Lys Leu Lys Lys Thr Gly Arg Leu Asp Glu Leu Glu Lys Ala
    50                  55                  60

atc acc act caa aac tgt aat act aaa tgt gtt acc ata cca agc act      240
Ile Thr Thr Gln Asn Cys Asn Thr Lys Cys Val Thr Ile Pro Ser Thr
65                  70                  75                  80

tgc tct gaa att tgg gga ctg agt aca cca aat acg ata gat cag tgg      288
Cys Ser Glu Ile Trp Gly Leu Ser Thr Pro Asn Thr Ile Asp Gln Trp
                85                  90                  95

gat aca aca ggc ctt tac agc ttc tct gaa caa acc agg tct ctt gat      336
Asp Thr Thr Gly Leu Tyr Ser Phe Ser Glu Gln Thr Arg Ser Leu Asp
            100                 105                 110

ggt cgt ctc cag gta tcc cat cga aaa gga ttg cca cat gtt ata tat      384
Gly Arg Leu Gln Val Ser His Arg Lys Gly Leu Pro His Val Ile Tyr
        115                 120                 125

tgc cga tta tgg cgc tgg cct gat ctt cac agt cat cat gaa ctc aag      432
Cys Arg Leu Trp Arg Trp Pro Asp Leu His Ser His His Glu Leu Lys
    130                 135                 140

gca att gaa aac tgc gaa tat gct ttt aat ctt aaa aag gat gaa gta      480
Ala Ile Glu Asn Cys Glu Tyr Ala Phe Asn Leu Lys Lys Asp Glu Val
145                 150                 155                 160

tgt gta aac cct tac cac tat cag aga gtt gag aca cca gtt ttg cct      528
Cys Val Asn Pro Tyr His Tyr Gln Arg Val Glu Thr Pro Val Leu Pro
                165                 170                 175

cca gta tta gtg ccc cga cac acc gag atc cta aca gaa ctt ccg cct      576
Pro Val Leu Val Pro Arg His Thr Glu Ile Leu Thr Glu Leu Pro Pro
            180                 185                 190

ctg gat gac tat act cac tcc att cca gaa aac act aac ttc cca gca      624
Leu Asp Asp Tyr Thr His Ser Ile Pro Glu Asn Thr Asn Phe Pro Ala
        195                 200                 205

gga att gag cca cag agt aat tat att cca gaa acg cca cct cct gga      672
Gly Ile Glu Pro Gln Ser Asn Tyr Ile Pro Glu Thr Pro Pro Pro Gly
    210                 215                 220

tat atc agt gaa gat gga gaa aca agt gac caa cag ttg aat caa agt      720
Tyr Ile Ser Glu Asp Gly Glu Thr Ser Asp Gln Gln Leu Asn Gln Ser
225                 230                 235                 240

atg gac aca ggc tct cca gca gaa cta tct cct act act ctt tcc cct      768
Met Asp Thr Gly Ser Pro Ala Glu Leu Ser Pro Thr Thr Leu Ser Pro
                245                 250                 255

gtt aat cat agc ttg gat tta cag cca gtt act tac tca gaa cct gca      816
Val Asn His Ser Leu Asp Leu Gln Pro Val Thr Tyr Ser Glu Pro Ala
            260                 265                 270
```

```
ttt tgg tgt tca ata gca tat tat gaa tta aat cag agg gtt gga gaa      864
Phe Trp Cys Ser Ile Ala Tyr Tyr Glu Leu Asn Gln Arg Val Gly Glu
        275                 280                 285

acc ttc cat gca tca cag ccc tca ctc act gta gat ggc ttt aca gac      912
Thr Phe His Ala Ser Gln Pro Ser Leu Thr Val Asp Gly Phe Thr Asp
    290                 295                 300

cca tca aat tca gag agg ttc tgc tta ggt tta ctc tcc aat gtt aac      960
Pro Ser Asn Ser Glu Arg Phe Cys Leu Gly Leu Leu Ser Asn Val Asn
305                 310                 315                 320

cga aat gcc acg gta gaa atg aca aga agg cat ata gga aga gga gtg     1008
Arg Asn Ala Thr Val Glu Met Thr Arg Arg His Ile Gly Arg Gly Val
                325                 330                 335

cgc tta tac tac ata ggt ggg gaa gtt ttt gct gag tgc cta agt gat     1056
Arg Leu Tyr Tyr Ile Gly Gly Glu Val Phe Ala Glu Cys Leu Ser Asp
            340                 345                 350

agt gca atc ttt gtg cag agc ccc aat tgt aat cag aga tat ggc tgg     1104
Ser Ala Ile Phe Val Gln Ser Pro Asn Cys Asn Gln Arg Tyr Gly Trp
        355                 360                 365

cac cct gca aca gtg tgt aaa att cca cca ggc tgt aat ctg aag atc     1152
His Pro Ala Thr Val Cys Lys Ile Pro Pro Gly Cys Asn Leu Lys Ile
    370                 375                 380

ttc aac aac cag gaa ttt gct gct ctt ctg gct cag tct gtt aat cag     1200
Phe Asn Asn Gln Glu Phe Ala Ala Leu Leu Ala Gln Ser Val Asn Gln
385                 390                 395                 400

ggt ttt gaa gcc gtc tat cag cta act aga atg tgc acc ata aga atg     1248
Gly Phe Glu Ala Val Tyr Gln Leu Thr Arg Met Cys Thr Ile Arg Met
                405                 410                 415

agt ttt gtg aaa ggg tgg gga gca gaa tac cga agg cag acg gta aca     1296
Ser Phe Val Lys Gly Trp Gly Ala Glu Tyr Arg Arg Gln Thr Val Thr
            420                 425                 430

agt act cct tgc tgg att gaa ctt cat ctg aat gga cct cta cag tgg     1344
Ser Thr Pro Cys Trp Ile Glu Leu His Leu Asn Gly Pro Leu Gln Trp
        435                 440                 445

ttg gac aaa gta tta act cag atg gga tcc cct tca gtg cgt tgc tca     1392
Leu Asp Lys Val Leu Thr Gln Met Gly Ser Pro Ser Val Arg Cys Ser
    450                 455                 460

agc atg tca tgg gta ccg cgg gcc cgg gat cca ccg gtc gcc acc atg     1440
Ser Met Ser Trp Val Pro Arg Ala Arg Asp Pro Pro Val Ala Thr Met
465                 470                 475                 480

gtg agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg gtc     1488
Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val
                485                 490                 495
```

```
gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc gag     1536
Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu
            500                 505                 510

ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc tgc     1584
Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys
        515                 520                 525

acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc ctg     1632
Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu
    530                 535                 540

acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag cag     1680
Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln
545                 550                 555                 560

cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag cgc     1728
His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg
                565                 570                 575

acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag gtg     1776
Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val
            580                 585                 590

aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc atc     1824
Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile
        595                 600                 605

gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac aac     1872
Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn
    610                 615                 620

tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac ggc     1920
Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly
625                 630                 635                 640

atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc gtg     1968
Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val
                645                 650                 655

cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc ccc     2016
Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro
            660                 665                 670

gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg agc     2064
Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser
        675                 680                 685

aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc gtg     2112
Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val
    690                 695                 700

acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag taa         2157
Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys
705                 710                 715
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<210> 10
<211> 718
<212> PRT
<213> Aequorea victoria and human

<400> 10

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Met Ser Ser Ile Leu Pro Phe Thr Pro Pro Val Val Lys Arg Leu Leu
1               5                  10                  15

Gly Trp Lys Lys Ser Ala Gly Gly Ser Gly Gly Ala Gly Gly Gly Glu
            20                  25                  30

Gln Asn Gly Gln Glu Glu Lys Trp Cys Glu Lys Ala Val Lys Ser Leu
        35                  40                  45

Val Lys Lys Leu Lys Lys Thr Gly Arg Leu Asp Glu Leu Glu Lys Ala
    50                  55                  60

Ile Thr Thr Gln Asn Cys Asn Thr Lys Cys Val Thr Ile Pro Ser Thr
65                  70                  75                  80

Cys Ser Glu Ile Trp Gly Leu Ser Thr Pro Asn Thr Ile Asp Gln Trp
                85                  90                  95

Asp Thr Thr Gly Leu Tyr Ser Phe Ser Glu Gln Thr Arg Ser Leu Asp
            100                 105                 110

Gly Arg Leu Gln Val Ser His Arg Lys Gly Leu Pro His Val Ile Tyr
        115                 120                 125

Cys Arg Leu Trp Arg Trp Pro Asp Leu His Ser His His Glu Leu Lys
    130                 135                 140

Ala Ile Glu Asn Cys Glu Tyr Ala Phe Asn Leu Lys Lys Asp Glu Val
145                 150                 155                 160

Cys Val Asn Pro Tyr His Tyr Gln Arg Val Glu Thr Pro Val Leu Pro
                165                 170                 175

Pro Val Leu Val Pro Arg His Thr Glu Ile Leu Thr Glu Leu Pro Pro
            180                 185                 190
```

Leu Asp Asp Tyr Thr His Ser Ile Pro Glu Asn Thr Asn Phe Pro Ala
195 200 205

Gly Ile Glu Pro Gln Ser Asn Tyr Ile Pro Glu Thr Pro Pro Pro Gly
210 215 220

Tyr Ile Ser Glu Asp Gly Glu Thr Ser Asp Gln Gln Leu Asn Gln Ser
225 230 235 240

Met Asp Thr Gly Ser Pro Ala Glu Leu Ser Pro Thr Thr Leu Ser Pro
245 250 255

Val Asn His Ser Leu Asp Leu Gln Pro Val Thr Tyr Ser Glu Pro Ala
260 265 270

Phe Trp Cys Ser Ile Ala Tyr Tyr Glu Leu Asn Gln Arg Val Gly Glu
275 280 285

Thr Phe His Ala Ser Gln Pro Ser Leu Thr Val Asp Gly Phe Thr Asp
290 295 300

Pro Ser Asn Ser Glu Arg Phe Cys Leu Gly Leu Leu Ser Asn Val Asn
305 310 315 320

Arg Asn Ala Thr Val Glu Met Thr Arg Arg His Ile Gly Arg Gly Val
325 330 335

Arg Leu Tyr Tyr Ile Gly Gly Glu Val Phe Ala Glu Cys Leu Ser Asp
340 345 350

Ser Ala Ile Phe Val Gln Ser Pro Asn Cys Asn Gln Arg Tyr Gly Trp
355 360 365

His Pro Ala Thr Val Cys Lys Ile Pro Pro Gly Cys Asn Leu Lys Ile
370 375 380

Phe Asn Asn Gln Glu Phe Ala Ala Leu Leu Ala Gln Ser Val Asn Gln
385 390 395 400

Gly Phe Glu Ala Val Tyr Gln Leu Thr Arg Met Cys Thr Ile Arg Met
405 410 415

```
Ser Phe Val Lys Gly Trp Gly Ala Glu Tyr Arg Arg Gln Thr Val Thr
            420                 425                 430

Ser Thr Pro Cys Trp Ile Glu Leu His Leu Asn Gly Pro Leu Gln Trp
        435                 440                 445

Leu Asp Lys Val Leu Thr Gln Met Gly Ser Pro Ser Val Arg Cys Ser
    450                 455                 460

Ser Met Ser Trp Val Pro Arg Ala Arg Asp Pro Pro Val Ala Thr Met
465                 470                 475                 480

Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val
                485                 490                 495

Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu
            500                 505                 510

Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys
        515                 520                 525

Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu
    530                 535                 540

Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln
545                 550                 555                 560

His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg
                565                 570                 575

Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val
            580                 585                 590

Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile
        595                 600                 605

Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn
    610                 615                 620

Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly
625                 630                 635                 640
```

```
Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val
                645                 650                 655

Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro
            660                 665                 670

Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser
        675                 680                 685

Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val
    690                 695                 700

Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys
705                 710                 715
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<210> 11
<211> 1908
<212> DNA
<213> Aequorea victoria and human

<220>
<221> CDS
<222> (1)..(1908)
<223>

<400> 11

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atg gtg agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg       48
Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
1               5                   10                  15

gtc gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc       96
Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
            20                  25                  30

gag ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc      144
Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
        35                  40                  45

tgc acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc      192
Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
    50                  55                  60

ctg acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag      240
Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65                  70                  75                  80

cag cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag      288
Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                85                  90                  95
```

```
cgc acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag      336
Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
            100                 105                 110

gtg aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc      384
Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
        115                 120                 125

atc gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac      432
Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
    130                 135                 140

aac tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac      480
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145                 150                 155                 160

ggc atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc      528
Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
                165                 170                 175

gtg cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc      576
Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
            180                 185                 190

ccc gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg      624
Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
        195                 200                 205

agc aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc      672
Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
    210                 215                 220

gtg acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag tcc      720
Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225                 230                 235                 240

gga ctc aga tct cga gct caa gct tcc atg agc gag acg gtc atc atg      768
Gly Leu Arg Ser Arg Ala Gln Ala Ser Met Ser Glu Thr Val Ile Met
                245                 250                 255

agc gag acg gtc atc tgt tcc agc cgg gcc act gtg atg ctt tat gat      816
Ser Glu Thr Val Ile Cys Ser Ser Arg Ala Thr Val Met Leu Tyr Asp
            260                 265                 270

gat ggc aac aag cga tgg ctc cct gct ggc acg ggt ccc cag gcc ttc      864
Asp Gly Asn Lys Arg Trp Leu Pro Ala Gly Thr Gly Pro Gln Ala Phe
        275                 280                 285

agc cgc gtc cag atc tac cac aac ccc acg gcc aat tcc ttt cgc gtc      912
Ser Arg Val Gln Ile Tyr His Asn Pro Thr Ala Asn Ser Phe Arg Val
    290                 295                 300

gtg ggc cgg aag atg cag ccc gac cag cag gtg gtc atc aac tgt gcc      960
Val Gly Arg Lys Met Gln Pro Asp Gln Gln Val Val Ile Asn Cys Ala
305                 310                 315                 320
```

```
atc gtc cgg ggt gtc aag tat aac cag gcc acc ccc aac ttc cat cag     1008
Ile Val Arg Gly Val Lys Tyr Asn Gln Ala Thr Pro Asn Phe His Gln
                325                 330                 335

tgg cgc gac gct cgc cag gtc tgg ggc ctc aac ttc ggc agc aag gag     1056
Trp Arg Asp Ala Arg Gln Val Trp Gly Leu Asn Phe Gly Ser Lys Glu
            340                 345                 350

gat gcg gcc cag ttt gcc gcc ggc atg gcc agt gcc cta gag gcg ttg     1104
Asp Ala Ala Gln Phe Ala Ala Gly Met Ala Ser Ala Leu Glu Ala Leu
        355                 360                 365

gaa gga ggt ggg ccc cct cca ccc cca gca ctt ccc acc tgg tcg gtc     1152
Glu Gly Gly Gly Pro Pro Pro Pro Pro Ala Leu Pro Thr Trp Ser Val
    370                 375                 380

ccg aac ggc ccc tcc ccg gag gag gtg gag cag cag aaa agg cag cag     1200
Pro Asn Gly Pro Ser Pro Glu Glu Val Glu Gln Gln Lys Arg Gln Gln
385                 390                 395                 400

ccc ggc ccg tcg gag cac ata gag cgc cgg gtc tcc aat gca gga ggc     1248
Pro Gly Pro Ser Glu His Ile Glu Arg Arg Val Ser Asn Ala Gly Gly
                405                 410                 415

cca cct gct ccc ccc gct ggg ggt cca ccc cca cca cca gga cct ccc     1296
Pro Pro Ala Pro Pro Ala Gly Gly Pro Pro Pro Pro Pro Gly Pro Pro
            420                 425                 430

cct cct cca ggt ccc ccc cca ccc cca ggt ttg ccc cct tcg ggg gtc     1344
Pro Pro Pro Gly Pro Pro Pro Pro Pro Gly Leu Pro Pro Ser Gly Val
        435                 440                 445

cca gct gca gcg cac gga gca ggg gga gga cca ccc cct gca ccc cct     1392
Pro Ala Ala Ala His Gly Ala Gly Gly Gly Pro Pro Pro Ala Pro Pro
    450                 455                 460

ctc ccg gca gca cag ggc cct ggt ggt ggg gga gct ggg gcc cca ggc     1440
Leu Pro Ala Ala Gln Gly Pro Gly Gly Gly Gly Ala Gly Ala Pro Gly
465                 470                 475                 480

ctg gcc gca gct att gct gga gcc aaa ctc agg aaa gtc agc aag cag     1488
Leu Ala Ala Ala Ile Ala Gly Ala Lys Leu Arg Lys Val Ser Lys Gln
                485                 490                 495

gag gag gcc tca ggg ggg ccc aca gcc ccc aaa gct gag agt ggt cga     1536
Glu Glu Ala Ser Gly Gly Pro Thr Ala Pro Lys Ala Glu Ser Gly Arg
            500                 505                 510

agc gga ggt ggg gga ctc atg gaa gag atg aac gcc atg ctg gcc cgg     1584
Ser Gly Gly Gly Gly Leu Met Glu Glu Met Asn Ala Met Leu Ala Arg
        515                 520                 525

aga agg aaa gcc acg caa gtt ggg gag aaa acc ccc aag gat gaa tct     1632
Arg Arg Lys Ala Thr Gln Val Gly Glu Lys Thr Pro Lys Asp Glu Ser
    530                 535                 540
```

```
gcc aat cag gag gag cca gag gcc aga gtc ccg gcc cag agt gaa tct     1680
Ala Asn Gln Glu Glu Pro Glu Ala Arg Val Pro Ala Gln Ser Glu Ser
545                 550                 555                 560

gtg cgg aga ccc tgg gag aag aac agc aca acc ttg cca agg atg aag     1728
Val Arg Arg Pro Trp Glu Lys Asn Ser Thr Thr Leu Pro Arg Met Lys
                565                 570                 575

tcg tct tct tcg gtg acc act tcc gag acc caa ccc tgc acg ccc agc     1776
Ser Ser Ser Ser Val Thr Thr Ser Glu Thr Gln Pro Cys Thr Pro Ser
            580                 585                 590

tcc agt gat tac tcg gac cta cag agg gtg aaa cag gag ctt ctg gaa     1824
Ser Ser Asp Tyr Ser Asp Leu Gln Arg Val Lys Gln Glu Leu Leu Glu
        595                 600                 605

gag gtg aag aag gaa ttg cag aaa gtg aaa gag gaa atc att gaa gcc     1872
Glu Val Lys Lys Glu Leu Gln Lys Val Lys Glu Glu Ile Ile Glu Ala
    610                 615                 620

ttc gtc cag gag ctg agg aag cgg ggt tct ccc tga                    1908
Phe Val Gln Glu Leu Arg Lys Arg Gly Ser Pro
625                 630                 635
```

<210> 12
<211> 635
<212> PRT
<213> Aequorea victoria and human

<400> 12

```
Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
1               5                   10                  15

Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
            20                  25                  30

Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
        35                  40                  45

Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
    50                  55                  60

Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65                  70                  75                  80

Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                85                  90                  95
```

Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
100 105 110

Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
115 120 125

Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
130 135 140

Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145 150 155 160

Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
165 170 175

Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
180 185 190

Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
195 200 205

Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
210 215 220

Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225 230 235 240

Gly Leu Arg Ser Arg Ala Gln Ala Ser Met Ser Glu Thr Val Ile Met
245 250 255

Ser Glu Thr Val Ile Cys Ser Ser Arg Ala Thr Val Met Leu Tyr Asp
260 265 270

Asp Gly Asn Lys Arg Trp Leu Pro Ala Gly Thr Gly Pro Gln Ala Phe
275 280 285

Ser Arg Val Gln Ile Tyr His Asn Pro Thr Ala Asn Ser Phe Arg Val
290 295 300

Val Gly Arg Lys Met Gln Pro Asp Gln Gln Val Val Ile Asn Cys Ala
305 310 315 320

Ile Val Arg Gly Val Lys Tyr Asn Gln Ala Thr Pro Asn Phe His Gln
325 330 335

Trp Arg Asp Ala Arg Gln Val Trp Gly Leu Asn Phe Gly Ser Lys Glu
340 345 350

Asp Ala Ala Gln Phe Ala Ala Gly Met Ala Ser Ala Leu Glu Ala Leu
355 360 365

Glu Gly Gly Gly Pro Pro Pro Pro Pro Ala Leu Pro Thr Trp Ser Val
370 375 380

Pro Asn Gly Pro Ser Pro Glu Glu Val Glu Gln Gln Lys Arg Gln Gln
385 390 395 400

Pro Gly Pro Ser Glu His Ile Glu Arg Arg Val Ser Asn Ala Gly Gly
405 410 415

Pro Pro Ala Pro Pro Ala Gly Gly Pro Pro Pro Pro Pro Gly Pro Pro
420 425 430

Pro Pro Pro Gly Pro Pro Pro Pro Pro Gly Leu Pro Pro Ser Gly Val
435 440 445

Pro Ala Ala Ala His Gly Ala Gly Gly Gly Pro Pro Pro Ala Pro Pro
450 455 460

Leu Pro Ala Ala Gln Gly Pro Gly Gly Gly Gly Ala Gly Ala Pro Gly
465 470 475 480

Leu Ala Ala Ala Ile Ala Gly Ala Lys Leu Arg Lys Val Ser Lys Gln
485 490 495

Glu Glu Ala Ser Gly Gly Pro Thr Ala Pro Lys Ala Glu Ser Gly Arg
500 505 510

Ser Gly Gly Gly Gly Leu Met Glu Glu Met Asn Ala Met Leu Ala Arg
515 520 525

Arg Arg Lys Ala Thr Gln Val Gly Glu Lys Thr Pro Lys Asp Glu Ser
530 535 540

```
Ala Asn Gln Glu Glu Pro Glu Ala Arg Val Pro Ala Gln Ser Glu Ser
545                 550                 555                 560

Val Arg Arg Pro Trp Glu Lys Asn Ser Thr Thr Leu Pro Arg Met Lys
                565                 570                 575

Ser Ser Ser Ser Val Thr Thr Ser Glu Thr Gln Pro Cys Thr Pro Ser
            580                 585                 590

Ser Ser Asp Tyr Ser Asp Leu Gln Arg Val Lys Gln Glu Leu Leu Glu
        595                 600                 605

Glu Val Lys Lys Glu Leu Gln Lys Val Lys Glu Glu Ile Ile Glu Ala
    610                 615                 620

Phe Val Gln Glu Leu Arg Lys Arg Gly Ser Pro
625                 630                 635
```


<210> 13
<211> 2394
<212> DNA
<213> Aequorea victoria and human

<220>
<221> CDS
<222> (1)..(2394)
<223>

<400> 13

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atg gtg agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg       48
Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
1               5                   10                  15

gtc gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc       96
Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
            20                  25                  30

gag ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc      144
Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
        35                  40                  45

tgc acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc      192
Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
    50                  55                  60

ctg acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag      240
Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65                  70                  75                  80
```

```
cag cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag      288
Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                85                  90                  95

cgc acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag      336
Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
            100                 105                 110

gtg aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc      384
Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
        115                 120                 125

atc gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac      432
Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
    130                 135                 140

aac tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac      480
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145                 150                 155                 160

ggc atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc      528
Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
                165                 170                 175

gtg cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc      576
Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
            180                 185                 190

ccc gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg      624
Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
        195                 200                 205

agc aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc      672
Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
    210                 215                 220

gtg acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag tcc      720
Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225                 230                 235                 240

gga ctc aga tct cga gcc atg gac gaa ctg ttc ccc ctc atc ttc ccg      768
Gly Leu Arg Ser Arg Ala Met Asp Glu Leu Phe Pro Leu Ile Phe Pro
                245                 250                 255

gca gag cca gcc cag gcc tct ggc ccc tat gtg gag atc att gag cag      816
Ala Glu Pro Ala Gln Ala Ser Gly Pro Tyr Val Glu Ile Ile Glu Gln
            260                 265                 270

ccc aag cag cgg ggc atg cgc ttc cgc tac aag tgc gag ggg cgc tcc      864
Pro Lys Gln Arg Gly Met Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser
        275                 280                 285

gcg ggc agc atc cca ggc gag agg agc aca gat acc acc aag acc cac      912
Ala Gly Ser Ile Pro Gly Glu Arg Ser Thr Asp Thr Thr Lys Thr His
    290                 295                 300
```

```
ccc acc atc aag atc aat ggc tac aca gga cca ggg aca gtg cgc atc      960
Pro Thr Ile Lys Ile Asn Gly Tyr Thr Gly Pro Gly Thr Val Arg Ile
305                 310                 315                 320

tcc ctg gtc acc aag gac cct cct cac cgg cct cac ccc cac gag ctt     1008
Ser Leu Val Thr Lys Asp Pro Pro His Arg Pro His Pro His Glu Leu
                325                 330                 335

gta gga aag gac tgc cgg gat ggc ttc tat gag gct gag ctc tgc ccg     1056
Val Gly Lys Asp Cys Arg Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro
            340                 345                 350

gac cgc tgc atc cac agt ttc cag aac ctg gga atc cag tgt gtg aag     1104
Asp Arg Cys Ile His Ser Phe Gln Asn Leu Gly Ile Gln Cys Val Lys
        355                 360                 365

aag cgg gac ctg gag cag gct atc agt cag cgc atc cag acc aac aac     1152
Lys Arg Asp Leu Glu Gln Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn
    370                 375                 380

aac ccc ttc caa gtt cct ata gaa gag cag cgt ggg gac tac gac ctg     1200
Asn Pro Phe Gln Val Pro Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu
385                 390                 395                 400

aat gct gtg cgg ctc tgc ttc cag gtg aca gtg cgg gac cca tca ggc     1248
Asn Ala Val Arg Leu Cys Phe Gln Val Thr Val Arg Asp Pro Ser Gly
                405                 410                 415

agg ccc ctc cgc ctg ccg cct gtc ctt cct cat ccc atc ttt gac aat     1296
Arg Pro Leu Arg Leu Pro Pro Val Leu Pro His Pro Ile Phe Asp Asn
            420                 425                 430

cgt gcc ccc aac act gcc gag ctc aag atc tgc cga gtg aac cga aac     1344
Arg Ala Pro Asn Thr Ala Glu Leu Lys Ile Cys Arg Val Asn Arg Asn
        435                 440                 445

tct ggc agc tgc ctc ggt ggg gat gag atc ttc cta ctg tgt gac aag     1392
Ser Gly Ser Cys Leu Gly Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys
    450                 455                 460

gtg cag aaa gag gac att gag gtg tat ttc acg gga cca ggc tgg gag     1440
Val Gln Lys Glu Asp Ile Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu
465                 470                 475                 480

gcc cga ggc tcc ttt tcg caa gct gat gtg cac cga caa gtg gcc att     1488
Ala Arg Gly Ser Phe Ser Gln Ala Asp Val His Arg Gln Val Ala Ile
                485                 490                 495

gtg ttc cgg acc cct ccc tac gca gac ccc agc ctg cag gct cct gtg     1536
Val Phe Arg Thr Pro Pro Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val
            500                 505                 510

cgt gtc tcc atg cag ctg cgg cgg cct tcc gac cgg gag ctc agt gag     1584
Arg Val Ser Met Gln Leu Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu
        515                 520                 525
```

```
ccc atg gaa ttc cag tac ctg cca gat aca gac gat cgt cac cgg att     1632
Pro Met Glu Phe Gln Tyr Leu Pro Asp Thr Asp Asp Arg His Arg Ile
    530                 535                 540

gag gag aaa cgt aaa agg aca tat gag acc ttc aag agc atc atg aag     1680
Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys
545                 550                 555                 560

aag agt cct ttc agc gga ccc acc gac ccc cgg cct cca cct cga cgc     1728
Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg
                565                 570                 575

att gct gtg cct tcc cgc agc tca gct tct gtc ccc aag cca gca ccc     1776
Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala Pro
            580                 585                 590

cag ccc tat ccc ttt acg tca tcc ctg agc acc atc aac tat gat gag     1824
Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu
        595                 600                 605

ttt ccc acc atg gtg ttt cct tct ggg cag atc agc cag gcc tcg gcc     1872
Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala
    610                 615                 620

ttg gcc ccg gcc cct ccc caa gtc ctg ccc cag gct cca gcc cct gcc     1920
Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln Ala Pro Ala Pro Ala
625                 630                 635                 640

cct gct cca gcc atg gta tca gct ctg gcc cag gcc cca gcc cct gtc     1968
Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala Pro Val
                645                 650                 655

cca gtc cta gcc cca ggc cct cct cag gct gtg gcc cca cct gcc ccc     2016
Pro Val Leu Ala Pro Gly Pro Pro Gln Ala Val Ala Pro Pro Ala Pro
            660                 665                 670

aag ccc acc cag gct ggg gaa gga acg ctg tca gag gcc ctg ctg cag     2064
Lys Pro Thr Gln Ala Gly Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln
        675                 680                 685

ctg cag ttt gat gat gaa gac ctg ggg gcc ttg ctt ggc aac agc aca     2112
Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr
    690                 695                 700

gac cca gct gtg ttc aca gac ctg gca tcc gtc gac aac tcc gag ttt     2160
Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val Asp Asn Ser Glu Phe
705                 710                 715                 720

cag cag ctg ctg aac cag ggc ata cct gtg gcc ccc cac aca act gag     2208
Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala Pro His Thr Thr Glu
                725                 730                 735

ccc atg ctg atg gag tac cct gag gct ata act cgc cta gtg aca ggg     2256
Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr Arg Leu Val Thr Gly
            740                 745                 750
```

```
gcc cag agg ccc ccc gac cca gct cct gct cca ctg ggg gcc ccg ggg     2304
Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly
        755                 760                 765

ctc ccc aat ggc ctc ctt tca gga gat gaa gac ttc tcc tcc att gcg     2352
Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala
    770                 775                 780

gac atg gac ttc tca gcc ctg ctg agt cag atc agc tcc taa             2394
Asp Met Asp Phe Ser Ala Leu Leu Ser Gln Ile Ser Ser
785                 790                 795
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<210> 14
<211> 797
<212> PRT
<213> Aequorea victoria and human

<400> 14

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Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
1               5                   10                  15

Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
            20                  25                  30

Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
        35                  40                  45

Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
    50                  55                  60

Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65                  70                  75                  80

Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                85                  90                  95

Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
            100                 105                 110

Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
        115                 120                 125

Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
    130                 135                 140
```

```
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145                 150                 155                 160

Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
                165                 170                 175

Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
            180                 185                 190

Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
        195                 200                 205

Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
    210                 215                 220

Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225                 230                 235                 240

Gly Leu Arg Ser Arg Ala Met Asp Glu Leu Phe Pro Leu Ile Phe Pro
                245                 250                 255

Ala Glu Pro Ala Gln Ala Ser Gly Pro Tyr Val Glu Ile Ile Glu Gln
            260                 265                 270

Pro Lys Gln Arg Gly Met Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser
        275                 280                 285

Ala Gly Ser Ile Pro Gly Glu Arg Ser Thr Asp Thr Thr Lys Thr His
    290                 295                 300

Pro Thr Ile Lys Ile Asn Gly Tyr Thr Gly Pro Gly Thr Val Arg Ile
305                 310                 315                 320

Ser Leu Val Thr Lys Asp Pro Pro His Arg Pro His Pro His Glu Leu
                325                 330                 335

Val Gly Lys Asp Cys Arg Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro
            340                 345                 350

Asp Arg Cys Ile His Ser Phe Gln Asn Leu Gly Ile Gln Cys Val Lys
        355                 360                 365
```

Lys Arg Asp Leu Glu Gln Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn
370 375 380

Asn Pro Phe Gln Val Pro Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu
385 390 395 400

Asn Ala Val Arg Leu Cys Phe Gln Val Thr Val Arg Asp Pro Ser Gly
405 410 415

Arg Pro Leu Arg Leu Pro Pro Val Leu Pro His Pro Ile Phe Asp Asn
420 425 430

Arg Ala Pro Asn Thr Ala Glu Leu Lys Ile Cys Arg Val Asn Arg Asn
435 440 445

Ser Gly Ser Cys Leu Gly Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys
450 455 460

Val Gln Lys Glu Asp Ile Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu
465 470 475 480

Ala Arg Gly Ser Phe Ser Gln Ala Asp Val His Arg Gln Val Ala Ile
485 490 495

Val Phe Arg Thr Pro Pro Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val
500 505 510

Arg Val Ser Met Gln Leu Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu
515 520 525

Pro Met Glu Phe Gln Tyr Leu Pro Asp Thr Asp Asp Arg His Arg Ile
530 535 540

Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys
545 550 555 560

Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg
565 570 575

Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala Pro
580 585 590

Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu
595 600 605

Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala
610 615 620

Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln Ala Pro Ala Pro Ala
625 630 635 640

Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala Pro Val
645 650 655

Pro Val Leu Ala Pro Gly Pro Pro Gln Ala Val Ala Pro Pro Ala Pro
660 665 670

Lys Pro Thr Gln Ala Gly Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln
675 680 685

Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr
690 695 700

Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val Asp Asn Ser Glu Phe
705 710 715 720

Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala Pro His Thr Thr Glu
725 730 735

Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr Arg Leu Val Thr Gly
740 745 750

Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly
755 760 765

Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala
770 775 780

Asp Met Asp Phe Ser Ala Leu Leu Ser Gln Ile Ser Ser
785 790 795

<210> 15
<211> 2394
<212> DNA
<213> Aequorea victoria and human

<220>
<221> CDS
<222> (1)..(2394)
<223>

<400> 15

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atg gac gaa ctg ttc ccc ctc atc ttc ccg gca gag cca gcc cag gcc       48
Met Asp Glu Leu Phe Pro Leu Ile Phe Pro Ala Glu Pro Ala Gln Ala
1               5                   10                  15

tct ggc ccc tat gtg gag atc att gag cag ccc aag cag cgg ggc atg       96
Ser Gly Pro Tyr Val Glu Ile Ile Glu Gln Pro Lys Gln Arg Gly Met
            20                  25                  30

cgc ttc cgc tac aag tgc gag ggg cgc tcc gcg ggc agc atc cca ggc      144
Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser Ala Gly Ser Ile Pro Gly
        35                  40                  45

gag agg agc aca gat acc acc aag acc cac ccc acc atc aag atc aat      192
Glu Arg Ser Thr Asp Thr Thr Lys Thr His Pro Thr Ile Lys Ile Asn
    50                  55                  60

ggc tac aca gga cca ggg aca gtg cgc atc tcc ctg gtc acc aag gac      240
Gly Tyr Thr Gly Pro Gly Thr Val Arg Ile Ser Leu Val Thr Lys Asp
65                  70                  75                  80

cct cct cac cgg cct cac ccc cac gag ctt gta gga aag gac tgc cgg      288
Pro Pro His Arg Pro His Pro His Glu Leu Val Gly Lys Asp Cys Arg
                85                  90                  95

gat ggc ttc tat gag gct gag ctc tgc ccg gac cgc tgc atc cac agt      336
Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro Asp Arg Cys Ile His Ser
            100                 105                 110

ttc cag aac ctg gga atc cag tgt gtg aag aag cgg gac ctg gag cag      384
Phe Gln Asn Leu Gly Ile Gln Cys Val Lys Lys Arg Asp Leu Glu Gln
        115                 120                 125

gct atc agt cag cgc atc cag acc aac aac aac ccc ttc caa gtt cct      432
Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn Asn Pro Phe Gln Val Pro
    130                 135                 140

ata gaa gag cag cgt ggg gac tac gac ctg aat gct gtg cgg ctc tgc      480
Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu Asn Ala Val Arg Leu Cys
145                 150                 155                 160

ttc cag gtg aca gtg cgg gac cca tca ggc agg ccc ctc cgc ctg ccg      528
Phe Gln Val Thr Val Arg Asp Pro Ser Gly Arg Pro Leu Arg Leu Pro
                165                 170                 175

cct gtc ctt cct cat ccc atc ttt gac aat cgt gcc ccc aac act gcc      576
Pro Val Leu Pro His Pro Ile Phe Asp Asn Arg Ala Pro Asn Thr Ala
            180                 185                 190
```

```
gag ctc aag atc tgc cga gtg aac cga aac tct ggc agc tgc ctc ggt      624
Glu Leu Lys Ile Cys Arg Val Asn Arg Asn Ser Gly Ser Cys Leu Gly
        195                 200                 205

ggg gat gag atc ttc cta ctg tgt gac aag gtg cag aaa gag gac att      672
Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys Val Gln Lys Glu Asp Ile
    210                 215                 220

gag gtg tat ttc acg gga cca ggc tgg gag gcc cga ggc tcc ttt tcg      720
Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu Ala Arg Gly Ser Phe Ser
225                 230                 235                 240

caa gct gat gtg cac cga caa gtg gcc att gtg ttc cgg acc cct ccc      768
Gln Ala Asp Val His Arg Gln Val Ala Ile Val Phe Arg Thr Pro Pro
                245                 250                 255

tac gca gac ccc agc ctg cag gct cct gtg cgt gtc tcc atg cag ctg      816
Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val Arg Val Ser Met Gln Leu
            260                 265                 270

cgg cgg cct tcc gac cgg gag ctc agt gag ccc atg gaa ttc cag tac      864
Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu Pro Met Glu Phe Gln Tyr
        275                 280                 285

ctg cca gat aca gac gat cgt cac cgg att gag gag aaa cgt aaa agg      912
Leu Pro Asp Thr Asp Asp Arg His Arg Ile Glu Glu Lys Arg Lys Arg
    290                 295                 300

aca tat gag acc ttc aag agc atc atg aag aag agt cct ttc agc gga      960
Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys Lys Ser Pro Phe Ser Gly
305                 310                 315                 320

ccc acc gac ccc cgg cct cca cct cga cgc att gct gtg cct tcc cgc     1008
Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg Ile Ala Val Pro Ser Arg
                325                 330                 335

agc tca gct tct gtc ccc aag cca gca ccc cag ccc tat ccc ttt acg     1056
Ser Ser Ala Ser Val Pro Lys Pro Ala Pro Gln Pro Tyr Pro Phe Thr
            340                 345                 350

tca tcc ctg agc acc atc aac tat gat gag ttt ccc acc atg gtg ttt     1104
Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu Phe Pro Thr Met Val Phe
        355                 360                 365

cct tct ggg cag atc agc cag gcc tcg gcc ttg gcc ccg gcc cct ccc     1152
Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala Leu Ala Pro Ala Pro Pro
    370                 375                 380

caa gtc ctg ccc cag gct cca gcc cct gcc cct gct cca gcc atg gta     1200
Gln Val Leu Pro Gln Ala Pro Ala Pro Ala Pro Ala Pro Ala Met Val
385                 390                 395                 400

tca gct ctg gcc cag gcc cca gcc cct gtc cca gtc cta gcc cca ggc     1248
Ser Ala Leu Ala Gln Ala Pro Ala Pro Val Pro Val Leu Ala Pro Gly
                405                 410                 415
```

```
cct cct cag gct gtg gcc cca cct gcc ccc aag ccc acc cag gct ggg     1296
Pro Pro Gln Ala Val Ala Pro Pro Ala Pro Lys Pro Thr Gln Ala Gly
            420                 425                 430

gaa gga acg ctg tca gag gcc ctg ctg cag ctg cag ttt gat gat gaa     1344
Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln Leu Gln Phe Asp Asp Glu
        435                 440                 445

gac ctg ggg gcc ttg ctt ggc aac agc aca gac cca gct gtg ttc aca     1392
Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr Asp Pro Ala Val Phe Thr
    450                 455                 460

gac ctg gca tcc gtc gac aac tcc gag ttt cag cag ctg ctg aac cag     1440
Asp Leu Ala Ser Val Asp Asn Ser Glu Phe Gln Gln Leu Leu Asn Gln
465                 470                 475                 480

ggc ata cct gtg gcc ccc cac aca act gag ccc atg ctg atg gag tac     1488
Gly Ile Pro Val Ala Pro His Thr Thr Glu Pro Met Leu Met Glu Tyr
                485                 490                 495

cct gag gct ata act cgc cta gtg aca ggg gcc cag agg ccc ccc gac     1536
Pro Glu Ala Ile Thr Arg Leu Val Thr Gly Ala Gln Arg Pro Pro Asp
            500                 505                 510

cca gct cct gct cca ctg ggg gcc ccg ggg ctc ccc aat ggc ctc ctt     1584
Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly Leu Pro Asn Gly Leu Leu
        515                 520                 525

tca gga gat gaa gac ttc tcc tcc att gcg gac atg gac ttc tca gcc     1632
Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala Asp Met Asp Phe Ser Ala
    530                 535                 540

ctg ctg agt cag atc agc tcc ttg gat cca ccg gtc gcc acc atg gtg     1680
Leu Leu Ser Gln Ile Ser Ser Leu Asp Pro Pro Val Ala Thr Met Val
545                 550                 555                 560

agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg gtc gag     1728
Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val Glu
                565                 570                 575

ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc gag ggc     1776
Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu Gly
            580                 585                 590

gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc tgc acc     1824
Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys Thr
        595                 600                 605

acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc ctg acc     1872
Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu Thr
    610                 615                 620

tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag cag cac     1920
Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln His
625                 630                 635                 640
```

```
gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag cgc acc     1968
Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg Thr
                645                 650                 655

atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag gtg aag     2016
Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val Lys
            660                 665                 670

ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc atc gac     2064
Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile Asp
        675                 680                 685

ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac aac tac     2112
Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn Tyr
    690                 695                 700

aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac ggc atc     2160
Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly Ile
705                 710                 715                 720

aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc gtg cag     2208
Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val Gln
                725                 730                 735

ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc ccc gtg     2256
Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro Val
            740                 745                 750

ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg agc aaa     2304
Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser Lys
        755                 760                 765

gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc gtg acc     2352
Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val Thr
    770                 775                 780

gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag taa             2394
Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys
785                 790                 795
```

<210> 16
<211> 797
<212> PRT
<213> Aequorea victoria and human

<400> 16

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Met Asp Glu Leu Phe Pro Leu Ile Phe Pro Ala Glu Pro Ala Gln Ala
1               5                   10                  15

Ser Gly Pro Tyr Val Glu Ile Ile Glu Gln Pro Lys Gln Arg Gly Met
            20                  25                  30
```

```
Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser Ala Gly Ser Ile Pro Gly
        35                  40                  45

Glu Arg Ser Thr Asp Thr Thr Lys Thr His Pro Thr Ile Lys Ile Asn
    50                  55                  60

Gly Tyr Thr Gly Pro Gly Thr Val Arg Ile Ser Leu Val Thr Lys Asp
65                  70                  75                  80

Pro Pro His Arg Pro His Pro His Glu Leu Val Gly Lys Asp Cys Arg
                85                  90                  95

Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro Asp Arg Cys Ile His Ser
            100                 105                 110

Phe Gln Asn Leu Gly Ile Gln Cys Val Lys Lys Arg Asp Leu Glu Gln
        115                 120                 125

Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn Asn Pro Phe Gln Val Pro
    130                 135                 140

Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu Asn Ala Val Arg Leu Cys
145                 150                 155                 160

Phe Gln Val Thr Val Arg Asp Pro Ser Gly Arg Pro Leu Arg Leu Pro
                165                 170                 175

Pro Val Leu Pro His Pro Ile Phe Asp Asn Arg Ala Pro Asn Thr Ala
            180                 185                 190

Glu Leu Lys Ile Cys Arg Val Asn Arg Asn Ser Gly Ser Cys Leu Gly
        195                 200                 205

Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys Val Gln Lys Glu Asp Ile
    210                 215                 220

Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu Ala Arg Gly Ser Phe Ser
225                 230                 235                 240

Gln Ala Asp Val His Arg Gln Val Ala Ile Val Phe Arg Thr Pro Pro
                245                 250                 255
```

Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val Arg Val Ser Met Gln Leu
260 265 270

Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu Pro Met Glu Phe Gln Tyr
275 280 285

Leu Pro Asp Thr Asp Asp Arg His Arg Ile Glu Glu Lys Arg Lys Arg
290 295 300

Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys Lys Ser Pro Phe Ser Gly
305 310 315 320

Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg Ile Ala Val Pro Ser Arg
325 330 335

Ser Ser Ala Ser Val Pro Lys Pro Ala Pro Gln Pro Tyr Pro Phe Thr
340 345 350

Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu Phe Pro Thr Met Val Phe
355 360 365

Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala Leu Ala Pro Ala Pro Pro
370 375 380

Gln Val Leu Pro Gln Ala Pro Ala Pro Ala Pro Ala Pro Ala Met Val
385 390 395 400

Ser Ala Leu Ala Gln Ala Pro Ala Pro Val Pro Val Leu Ala Pro Gly
405 410 415

Pro Pro Gln Ala Val Ala Pro Pro Ala Pro Lys Pro Thr Gln Ala Gly
420 425 430

Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln Leu Gln Phe Asp Asp Glu
435 440 445

Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr Asp Pro Ala Val Phe Thr
450 455 460

Asp Leu Ala Ser Val Asp Asn Ser Glu Phe Gln Gln Leu Leu Asn Gln
465 470 475 480

Gly Ile Pro Val Ala Pro His Thr Thr Glu Pro Met Leu Met Glu Tyr
485 490 495

Pro Glu Ala Ile Thr Arg Leu Val Thr Gly Ala Gln Arg Pro Pro Asp
500 505 510

Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly Leu Pro Asn Gly Leu Leu
515 520 525

Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala Asp Met Asp Phe Ser Ala
530 535 540

Leu Leu Ser Gln Ile Ser Ser Leu Asp Pro Pro Val Ala Thr Met Val
545 550 555 560

Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val Glu
565 570 575

Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu Gly
580 585 590

Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys Thr
595 600 605

Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu Thr
610 615 620

Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln His
625 630 635 640

Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg Thr
645 650 655

Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val Lys
660 665 670

Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile Asp
675 680 685

Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn Tyr
690 695 700

```
Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly Ile
705                 710                 715                 720

Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val Gln
                725                 730                 735

Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro Val
            740                 745                 750

Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser Lys
        755                 760                 765

Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val Thr
    770                 775                 780

Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys
785                 790                 795
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<210> 17
<211> 2757
<212> DNA
<213> Aequorea victoria and human

<220>
<221> CDS
<222> (1)..(2757)
<223>

<400> 17

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atg gtg agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg       48
Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
1               5                   10                  15

gtc gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc       96
Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
            20                  25                  30

gag ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc      144
Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
        35                  40                  45

tgc acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc      192
Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
    50                  55                  60

ctg acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag      240
Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65                  70                  75                  80
```

```
cag cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag      288
Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                85                  90                  95

cgc acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag      336
Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
            100                 105                 110

gtg aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc      384
Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
        115                 120                 125

atc gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac      432
Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
    130                 135                 140

aac tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac      480
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145                 150                 155                 160

ggc atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc      528
Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
                165                 170                 175

gtg cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc      576
Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
            180                 185                 190

ccc gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg      624
Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
        195                 200                 205

agc aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc      672
Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
    210                 215                 220

gtg acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag tcc      720
Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225                 230                 235                 240

gga ctc aga tct cga ggc aag atg gct gac ccg gct gcg ggg ccg ccg      768
Gly Leu Arg Ser Arg Gly Lys Met Ala Asp Pro Ala Ala Gly Pro Pro
                245                 250                 255

ccg agc gag ggc gag gag agc acc gtg cgc ttc gcc cgc aaa ggc gcc      816
Pro Ser Glu Gly Glu Glu Ser Thr Val Arg Phe Ala Arg Lys Gly Ala
            260                 265                 270

ctc cgg cag aag aac gtg cat gag gtc aag aac cac aaa ttc acc gcc      864
Leu Arg Gln Lys Asn Val His Glu Val Lys Asn His Lys Phe Thr Ala
        275                 280                 285

cgc ttc ttc aag cag ccc acc ttc tgc agc cac tgc acc gac ttc atc      912
Arg Phe Phe Lys Gln Pro Thr Phe Cys Ser His Cys Thr Asp Phe Ile
    290                 295                 300
```

```
tgg ggc ttc ggg aag cag gga ttc cag tgc caa gtt tgc tgc ttt gtg      960
Trp Gly Phe Gly Lys Gln Gly Phe Gln Cys Gln Val Cys Cys Phe Val
305                 310                 315                 320

gtg cac aag cgg tgc cat gaa ttt gtc aca ttc tcc tgc cct ggc gct     1008
Val His Lys Arg Cys His Glu Phe Val Thr Phe Ser Cys Pro Gly Ala
                325                 330                 335

gac aag ggt cca gcc tcc gat gac ccc cgc agc aaa cac aag ttt aag     1056
Asp Lys Gly Pro Ala Ser Asp Asp Pro Arg Ser Lys His Lys Phe Lys
            340                 345                 350

atc cac acg tac tcc agc ccc acg ttt tgt gac cac tgt ggg tca ctg     1104
Ile His Thr Tyr Ser Ser Pro Thr Phe Cys Asp His Cys Gly Ser Leu
        355                 360                 365

ctg tat gga ctc atc cac cag ggg atg aaa tgt gac acc tgc atg atg     1152
Leu Tyr Gly Leu Ile His Gln Gly Met Lys Cys Asp Thr Cys Met Met
    370                 375                 380

aat gtg cac aag cgc tgc gtg atg aat gtt ccc agc ctg tgt ggc acg     1200
Asn Val His Lys Arg Cys Val Met Asn Val Pro Ser Leu Cys Gly Thr
385                 390                 395                 400

gac cac acg gag cgc cgc ggc cgc atc tac atc cag gcc cac atc gac     1248
Asp His Thr Glu Arg Arg Gly Arg Ile Tyr Ile Gln Ala His Ile Asp
                405                 410                 415

agg gac gtc ctc att gtc ctc gta aga gat gct aaa aac ctt gta cct     1296
Arg Asp Val Leu Ile Val Leu Val Arg Asp Ala Lys Asn Leu Val Pro
            420                 425                 430

atg gac ccc aat ggc ctg tca gat ccc tac gta aaa ctg aaa ctg att     1344
Met Asp Pro Asn Gly Leu Ser Asp Pro Tyr Val Lys Leu Lys Leu Ile
        435                 440                 445

ccc gat ccc aaa agt gag agc aaa cag aag acc aaa acc atc aaa tgc     1392
Pro Asp Pro Lys Ser Glu Ser Lys Gln Lys Thr Lys Thr Ile Lys Cys
    450                 455                 460

tcc ctc aac cct gag tgg aat gag aca ttt aga ttt cag ctg aaa gaa     1440
Ser Leu Asn Pro Glu Trp Asn Glu Thr Phe Arg Phe Gln Leu Lys Glu
465                 470                 475                 480

tcg gac aaa gac aga aga ctg tca gta gag att tgg gat tgg gat ttg     1488
Ser Asp Lys Asp Arg Arg Leu Ser Val Glu Ile Trp Asp Trp Asp Leu
                485                 490                 495

acc agc agg aat gac ttc atg gga tct ttg tcc ttt ggg att tct gaa     1536
Thr Ser Arg Asn Asp Phe Met Gly Ser Leu Ser Phe Gly Ile Ser Glu
            500                 505                 510

ctt cag aag gcc agt gtt gat ggc tgg ttt aag tta ctg agc cag gag     1584
Leu Gln Lys Ala Ser Val Asp Gly Trp Phe Lys Leu Leu Ser Gln Glu
        515                 520                 525
```

```
gaa ggc gag tac ttc aat gtg cct gtg cca cca gaa gga agt gag gcc     1632
Glu Gly Glu Tyr Phe Asn Val Pro Val Pro Pro Glu Gly Ser Glu Ala
    530                 535                 540

aat gaa gaa ctg cgg cag aaa ttt gag agg gcc aag atc agt cag gga     1680
Asn Glu Glu Leu Arg Gln Lys Phe Glu Arg Ala Lys Ile Ser Gln Gly
545                 550                 555                 560

acc aag gtc ccg gaa gaa aag acg acc aac act gtc tcc aaa ttt gac     1728
Thr Lys Val Pro Glu Glu Lys Thr Thr Asn Thr Val Ser Lys Phe Asp
                565                 570                 575

aac aat ggc aac aga gac cgg atg aaa ctg acc gat ttt aac ttc cta     1776
Asn Asn Gly Asn Arg Asp Arg Met Lys Leu Thr Asp Phe Asn Phe Leu
            580                 585                 590

atg gtg ctg ggg aaa ggc agc ttt ggc aag gtc atg ctt tca gaa cga     1824
Met Val Leu Gly Lys Gly Ser Phe Gly Lys Val Met Leu Ser Glu Arg
        595                 600                 605

aaa ggc aca gat gag ctc tat gct gtg aag atc ctg aag aag gac gtt     1872
Lys Gly Thr Asp Glu Leu Tyr Ala Val Lys Ile Leu Lys Lys Asp Val
    610                 615                 620

gtg atc caa gat gat gac gtg gag tgc act atg gtg gag aag cgg gtg     1920
Val Ile Gln Asp Asp Asp Val Glu Cys Thr Met Val Glu Lys Arg Val
625                 630                 635                 640

ttg gcc ctg cct ggg aag ccg ccc ttc ctg acc cag ctc cac tcc tgc     1968
Leu Ala Leu Pro Gly Lys Pro Pro Phe Leu Thr Gln Leu His Ser Cys
                645                 650                 655

ttc cag acc atg gac cgc ctg tac ttt gtg atg gag tac gtg aat ggg     2016
Phe Gln Thr Met Asp Arg Leu Tyr Phe Val Met Glu Tyr Val Asn Gly
            660                 665                 670

ggc gac ctc atg tat cac atc cag caa gtc ggc cgg ttc aag gag ccc     2064
Gly Asp Leu Met Tyr His Ile Gln Gln Val Gly Arg Phe Lys Glu Pro
        675                 680                 685

cat gct gta ttt tac gct gca gaa att gcc atc ggt ctg ttc ttc tta     2112
His Ala Val Phe Tyr Ala Ala Glu Ile Ala Ile Gly Leu Phe Phe Leu
    690                 695                 700

cag agt aag ggc atc att tac cgt gac cta aaa ctt gac aac gtg atg     2160
Gln Ser Lys Gly Ile Ile Tyr Arg Asp Leu Lys Leu Asp Asn Val Met
705                 710                 715                 720

ctc gat tct gag gga cac atc aag att gcc gat ttt ggc atg tgt aag     2208
Leu Asp Ser Glu Gly His Ile Lys Ile Ala Asp Phe Gly Met Cys Lys
                725                 730                 735

gaa aac atc tgg gat ggg gtg aca acc aag aca ttc tgt ggc act cca     2256
Glu Asn Ile Trp Asp Gly Val Thr Thr Lys Thr Phe Cys Gly Thr Pro
            740                 745                 750
```

```
gac tac atc gcc ccc gag ata att gct tat cag ccc tat ggg aag tcc     2304
Asp Tyr Ile Ala Pro Glu Ile Ile Ala Tyr Gln Pro Tyr Gly Lys Ser
        755                 760                 765

gtg gat tgg tgg gca ttt gga gtc ctg ctg tat gaa atg ttg gct ggg     2352
Val Asp Trp Trp Ala Phe Gly Val Leu Leu Tyr Glu Met Leu Ala Gly
    770                 775                 780

cag gca ccc ttt gaa ggg gag gat gaa gat gaa ctc ttc caa tcc atc     2400
Gln Ala Pro Phe Glu Gly Glu Asp Glu Asp Glu Leu Phe Gln Ser Ile
785                 790                 795                 800

atg gaa cac aac gta gcc tat ccc aag tct atg tcc aag gaa gct gtg     2448
Met Glu His Asn Val Ala Tyr Pro Lys Ser Met Ser Lys Glu Ala Val
                805                 810                 815

gcc atc tgc aaa ggg ctg atg acc aaa cac cca ggc aaa cgt ctg ggt     2496
Ala Ile Cys Lys Gly Leu Met Thr Lys His Pro Gly Lys Arg Leu Gly
            820                 825                 830

tgt gga cct gaa ggc gaa cgt gat atc aaa gag cat gca ttt ttc cgg     2544
Cys Gly Pro Glu Gly Glu Arg Asp Ile Lys Glu His Ala Phe Phe Arg
        835                 840                 845

tat att gat tgg gag aaa ctt gaa cgc aaa gag atc cag ccc cct tat     2592
Tyr Ile Asp Trp Glu Lys Leu Glu Arg Lys Glu Ile Gln Pro Pro Tyr
    850                 855                 860

aag cca aaa gct aga gac aag aga gac acc tcc aac ttc gac aaa gag     2640
Lys Pro Lys Ala Arg Asp Lys Arg Asp Thr Ser Asn Phe Asp Lys Glu
865                 870                 875                 880

ttc acc aga cag cct gtg gaa ctg acc ccc act gat aaa ctc ttc atc     2688
Phe Thr Arg Gln Pro Val Glu Leu Thr Pro Thr Asp Lys Leu Phe Ile
                885                 890                 895

atg aac ttg gac caa aat gaa ttt gct ggc ttc tct tat act aac cca     2736
Met Asn Leu Asp Gln Asn Glu Phe Ala Gly Phe Ser Tyr Thr Asn Pro
            900                 905                 910

gag ttt gtc att aat gtg tag                                       2757
Glu Phe Val Ile Asn Val
        915
```

<210> 18
<211> 918
<212> PRT
<213> Aequorea victoria and human

<400> 18

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Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
1               5                   10                  15
```

Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
20 25 30

Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
35 40 45

Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
50 55 60

Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65 70 75 80

Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
85 90 95

Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
100 105 110

Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
115 120 125

Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
130 135 140

Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145 150 155 160

Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
165 170 175

Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
180 185 190

Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
195 200 205

Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
210 215 220

Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225 230 235 240

```
Gly Leu Arg Ser Arg Gly Lys Met Ala Asp Pro Ala Ala Gly Pro Pro
                245                 250                 255

Pro Ser Glu Gly Glu Glu Ser Thr Val Arg Phe Ala Arg Lys Gly Ala
            260                 265                 270

Leu Arg Gln Lys Asn Val His Glu Val Lys Asn His Lys Phe Thr Ala
        275                 280                 285

Arg Phe Phe Lys Gln Pro Thr Phe Cys Ser His Cys Thr Asp Phe Ile
    290                 295                 300

Trp Gly Phe Gly Lys Gln Gly Phe Gln Cys Gln Val Cys Cys Phe Val
305                 310                 315                 320

Val His Lys Arg Cys His Glu Phe Val Thr Phe Ser Cys Pro Gly Ala
                325                 330                 335

Asp Lys Gly Pro Ala Ser Asp Asp Pro Arg Ser Lys His Lys Phe Lys
            340                 345                 350

Ile His Thr Tyr Ser Ser Pro Thr Phe Cys Asp His Cys Gly Ser Leu
        355                 360                 365

Leu Tyr Gly Leu Ile His Gln Gly Met Lys Cys Asp Thr Cys Met Met
    370                 375                 380

Asn Val His Lys Arg Cys Val Met Asn Val Pro Ser Leu Cys Gly Thr
385                 390                 395                 400

Asp His Thr Glu Arg Arg Gly Arg Ile Tyr Ile Gln Ala His Ile Asp
                405                 410                 415

Arg Asp Val Leu Ile Val Leu Val Arg Asp Ala Lys Asn Leu Val Pro
            420                 425                 430

Met Asp Pro Asn Gly Leu Ser Asp Pro Tyr Val Lys Leu Lys Leu Ile
        435                 440                 445

Pro Asp Pro Lys Ser Glu Ser Lys Gln Lys Thr Lys Thr Ile Lys Cys
    450                 455                 460
```

```
Ser Leu Asn Pro Glu Trp Asn Glu Thr Phe Arg Phe Gln Leu Lys Glu
465                 470                 475                 480

Ser Asp Lys Asp Arg Arg Leu Ser Val Glu Ile Trp Asp Trp Asp Leu
                485                 490                 495

Thr Ser Arg Asn Asp Phe Met Gly Ser Leu Ser Phe Gly Ile Ser Glu
            500                 505                 510

Leu Gln Lys Ala Ser Val Asp Gly Trp Phe Lys Leu Leu Ser Gln Glu
        515                 520                 525

Glu Gly Glu Tyr Phe Asn Val Pro Val Pro Pro Glu Gly Ser Glu Ala
    530                 535                 540

Asn Glu Glu Leu Arg Gln Lys Phe Glu Arg Ala Lys Ile Ser Gln Gly
545                 550                 555                 560

Thr Lys Val Pro Glu Glu Lys Thr Thr Asn Thr Val Ser Lys Phe Asp
                565                 570                 575

Asn Asn Gly Asn Arg Asp Arg Met Lys Leu Thr Asp Phe Asn Phe Leu
            580                 585                 590

Met Val Leu Gly Lys Gly Ser Phe Gly Lys Val Met Leu Ser Glu Arg
        595                 600                 605

Lys Gly Thr Asp Glu Leu Tyr Ala Val Lys Ile Leu Lys Lys Asp Val
    610                 615                 620

Val Ile Gln Asp Asp Asp Val Glu Cys Thr Met Val Glu Lys Arg Val
625                 630                 635                 640

Leu Ala Leu Pro Gly Lys Pro Pro Phe Leu Thr Gln Leu His Ser Cys
                645                 650                 655

Phe Gln Thr Met Asp Arg Leu Tyr Phe Val Met Glu Tyr Val Asn Gly
            660                 665                 670

Gly Asp Leu Met Tyr His Ile Gln Gln Val Gly Arg Phe Lys Glu Pro
        675                 680                 685
```

```
His Ala Val Phe Tyr Ala Ala Glu Ile Ala Ile Gly Leu Phe Phe Leu
    690                 695                 700

Gln Ser Lys Gly Ile Ile Tyr Arg Asp Leu Lys Leu Asp Asn Val Met
705                 710                 715                 720

Leu Asp Ser Glu Gly His Ile Lys Ile Ala Asp Phe Gly Met Cys Lys
                725                 730                 735

Glu Asn Ile Trp Asp Gly Val Thr Thr Lys Thr Phe Cys Gly Thr Pro
            740                 745                 750

Asp Tyr Ile Ala Pro Glu Ile Ile Ala Tyr Gln Pro Tyr Gly Lys Ser
        755                 760                 765

Val Asp Trp Trp Ala Phe Gly Val Leu Leu Tyr Glu Met Leu Ala Gly
    770                 775                 780

Gln Ala Pro Phe Glu Gly Glu Asp Glu Asp Glu Leu Phe Gln Ser Ile
785                 790                 795                 800

Met Glu His Asn Val Ala Tyr Pro Lys Ser Met Ser Lys Glu Ala Val
                805                 810                 815

Ala Ile Cys Lys Gly Leu Met Thr Lys His Pro Gly Lys Arg Leu Gly
            820                 825                 830

Cys Gly Pro Glu Gly Glu Arg Asp Ile Lys Glu His Ala Phe Phe Arg
        835                 840                 845

Tyr Ile Asp Trp Glu Lys Leu Glu Arg Lys Glu Ile Gln Pro Pro Tyr
    850                 855                 860

Lys Pro Lys Ala Arg Asp Lys Arg Asp Thr Ser Asn Phe Asp Lys Glu
865                 870                 875                 880

Phe Thr Arg Gln Pro Val Glu Leu Thr Pro Thr Asp Lys Leu Phe Ile
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Glu Phe Val Ile Asn Val
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